# **A807**

# **OPERATING AND SERVICE INSTRUCTIONS**



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### SICHERHEIT UND ERSTE HILFE

### **SICHERHEIT**

Durch Entfernen von Gehäuseteilen, Abschirmungen etc. werden stromführende Teile freigelegt. Aus diesem Grunde müssen die folgenden Sicherheitsvorschriften unbedingt beachtet werden:

### 1. Eingriffe in ein Gerät

dürfen nur von Fachpersonal vorgenommen werden.

### Vor Entfernen von Gehäuseteilen: Gerät ausschalten und vom Netz trennen.

### 3. Bei geöffnetem Gerät:

- Netzteil- oder Motorkondensatoren mit einem passenden Widerstand entladen.
- Bauteile grosser Leistung, wie Leistungstransistoren und -widerstände sowie Magnetspulen und Wickelmotoren erst nach dem Abkühlen berühren.

### Servicearbeiten bei geöffnetem, unter Spannung stehendem Gerät:

- Keine blanken Schaltungsteile berühren
- Isolierte Werkzeuge verwenden
- Metallene Halbleitergehäuse nicht berühren, da sie hohe Spannungen aufweisen können.

### ERSTE HILFE (bei Stromunfällen)

### Bei einem Stromunfall die betroffene Person raschmöglichst vom Strom trennen:

- Durch Ausschalten des Gerätes
- Ausziehen oder Unterbrechen der Netzzuleitung
- Betroffene Personen mit isoliertem Material (Holz, Kunstoff) von der Gefahrenquelle wegstossen
- Nach einem Stromunfall sollte immer ein Arzt aufgesucht werden.

### **ACHTUNG**

EINE UNTER SPANNUNG STE-HENDE PERSON DARF NICHT BERÜHRT WERDEN, SIE KÖNNEN DABEI SELBST ELEKTRISIERT WERDEN!

### Bei Bewusstlosigkeit des Verunfallten:

- Puls kontrollieren,
- bei ausgesetzter Atmung künstlich beatmen,
- Seitenlagerung des Verunfallten und Arzt verständigen.

### SAFETY AND FIRST AID

### SAFETY

There are no user serviceable components inside the equipment, live parts are laid open when removing protective covers and shieldings. It is essential therefore to ensure that the subsequent safety rules are strictly observed when performing service work or repairs.

 Servicing of electronic equipment must be performed by qualified personnel only.

### 2. Before removing covers:

Switch off the equipment and unplug the mains cable.

### 3. When the equipment is open:

- Discharge power supply- and motor capacitors through a suitable resistor.
- Components, that carry heavy electrical loads, such as power transistors and resistors as well as solenoid coils and motors should not be touched before a cooling off interval, as a precaution to avoid burns.

# 4. Servicing unprotected and operating equipment:

- Never touch bare wires or circuitry
- Use insulated tools only
- Never touch metal semiconductor cases because they may carry high voltages.

### FIRST AID (in case of electric shock)

### Separate the person as quickly as possible from the electric power source;

- by switching off the equipment,
- unplugging or disconnecting the mains cable,
- pushing the person away from the power source by using dry insulating material (such as wood or plastic).
- After having sustained an electric shock, always consult a doctor.

### WARNING:

DO NOT TOUCH THE PERSON OR HIS CLOTHING BEFORE POWER IS TURNED OFF, OTHERWISE YOU STAND THE RISK OF SUSTAINING AN ELECTRIC SHOCK AS WELL!

### 2. If the person is unconscious

- Check the pulse,
- reanimate the person if respiration is poor.
- lay the body down and turn it to one side, call for a doctor immediately.

### SÉCURITÉ ET PREMIERS SECOURS

### **SÉCURITÉ**

Si les couvercles de protection sont enlevés, les parties de l'appareil qui sont sous tension ne sont plus protégées. Il est donc d'une nécessitée absolue de suivre les instructions suivantes:

# 1. Les interventions dans les appareils électriques

doivent être faites uniquement que par du personnel qualifié

# 2. Avant d'enlever les couvercles de protection:

Couper l'interrupteur principal et débrancher le câble secteur.

# 3. Après avoir enlevé les couvercles de protection:

- Les condensateurs de l'alimentation et des moteurs doivent être déchargés à l'aide d'une résistance appropriée.
- Il est prudent de laisser refroidir les composants de haute puissance, par ex.: transistors de puissance, résistances de puissances de même que des électroaimants et les moteurs de bobinage.

### S'il faut que l'appareil soit sous tension pendent les réglages internes;

- Ne jamais toucher les circuits non isolés
- Travailler seulement avec des outils isolés

# **PREMIERS SECOURS** (en cas d'électrocution)

### Si la personne est dans l'impossibilité de se libérer:

- Couper l'interrupteur principal
- Couper le courant
- Repousser la personne de l'appareil à l'aide d'un objet en matière non conductrice (matière plastique ou boîs)
- Après une électrocution, consulter un médecin.

### ATTENTION

NE JAMAIS TOUCHER UNE PER-SONNE QUI EST SOUS TENSION, SOUS PEINE DE SUBIR ÉGALE-MENT UNE ÉLECTROCUTION

# 2. En cas de perte de connaissance de la personne électrocutée:

- Controller le pouls
- Si nécessaire, pratiquer la respiration artificielle
- Mettre l'accidenté sur le coté latérale et consulter un médecin.

### **Preliminary information**

This document describes the standard STUDER A 807. The information concerning the new 1000 m version, the 1/2" version, or one of the timecode versions is in the process of being completed.

In the meantime the following pages (together with the standard A 807 manual) will certainly serve you as preliminary information for the new versions.

EDITION: 6. Februar 1990

### New 1/4" program jumpers (for units with serial numbers above 10.000) Software number: 26/89 Hardware jumpers: JUMPER Н 1 (H = ON, L = OFF)H = DISABLED06 ADJUST KEY L = ENABLEDJUMPER Н L (H = ON, L = OFF)H = 4 CHANNEL 10 CHANNEL VERSION L = 2 CHANNEL H = 7.5, 15, 30 ips11 SPEED VERSION L = 3.75, 7.5, 15 ipsH = STANDARD (REC/REPRO)12 PLAYBACK ONLY VERSION L = PLAYBACK ONLY H = WITHOUT READY KEY READY-KEY VERSION 13 L = WITH READY KEY H = INLINEERASE HEAD GAP 14 88 L = STAGGERED H = WITH MIC INPUT 15 MICROPHONE INPUT(S) 88 L = WITHOUT MIC INPUT H = WITH TC CHANNEL 16 TIME CODE VERSION L = WITHOUT TC CHANNEL 17 Not yet assigned JUMPER Н L (H = ON, L = OFF)

46

48

INSERT KEY S 48

The shown jumper settings correspond to the standard settings of a A 807 1/4" VUK version and should normally not be changed.

hard wired

H = KEY 48 NOT ACTIVE

L = KEY 48 ACTIVE

### New 1/2" - 4 Channel program jumpers Software number: 26/89 Hardware jumpers: JUMPER (H = ON, L = OFF)H = DISABLED 06 ADJUST KEY 160 L = ENABLED**JUMPER** Н (H = ON, L = OFF)L H = 4 CHANNEL 10 CHANNEL VERSION L = 2 CHANNEL H = 7.5, 15, 30 ipsSPEED VERSION 11 93 L = 3.75, 7.5, 15 ipsH = STANDARD (REC/REPRO)PLAYBACK ONLY VERSION 12 L = PLAYBACK ONLYH = WITHOUT READY KEY READY-KEY VERSION 13 L = WITH READY KEY H = INLINE 14 ERASE HEAD GAP L = STAGGERED H = WITH MIC INPUT MICROPHONE INPUT(S) 15 L = WITHOUT MIC INPUT H = WITH TC CHANNEL TIME CODE VERSION 16 L = WITHOUT TC CHANNEL 17 Not yet assigned JUMPER Н L (H = ON, L = OFF)H = KEY 46 NOT ACTIVE INSERT KEY S 46 46 L = KEY 46 ACTIVE

The shown jumper settings correspond to the standard settings of a A 807-4-1/2" VUK version and should normally not be changed.

EDITION: 6. Februar 1990

## New timecode versions program jumpers

Software number:	26/89			
Hardware jumpers:				
Time trans jampara	JUMPER		н ь	(H = ON, L = OFF)
	06	ADJUST KEY	88	H = DISABLED
				L = ENABLED
	JUMPER		H L	(H = ON, L = OFF)
	10	CHANNEL VERSION	88	H = 4 CHANNEL L = 2 CHANNEL
	11	SPEED VERSION		H = 7.5, 15, 30 ips
				L = 3.75, 7.5, 15 ips
	12	PLAYBACK ONLY VERSION		H = STANDARD (REC/REPRO)
	16.	PLATBACK UNLT VERSION		L = PLAYBACK ONLY
	10	DEADY WENT WEDGEN		H = WITHOUT READY KEY
	13	READY-KEY VERSION		L = WITH READY KEY
				H = INLINE
	14	ERASE HEAD GAP	19	L = STAGGERED
				H = WITH MIC INPUT
	15	MICROPHONE INPUT(S)	9	L = WITHOUT MIC INPUT
	16	TIMECODE VERSION	180	H = WITH TC CHANNEL
				L = WITHOUT TC CHANNEL
	17	Not yet assigned		
	JUMPER		H L	(H = ON, L = OFF)
	46		hard wired	
			[	H = KEY 48 NOT ACTIVE
	48	INSERT KEY S 48		L = KEY 48 ACTIVE

The shown jumper settings correspond to the standard settings of a A 807 1/4" Timecode version and should normally not be changed.

E/4

### Software jumpers (all versions)

JUMPER		STATUS
00	MUTE TIME FOR EACH SPEED	<u>000</u> - 950 milliseconds
00	MOTE TIME FOR EACH SPEED	in steps of 50 millisec.
01	RS 232 BAUD RATE	12 = 1200 BAUD
01	RS 232 BAUD RATE	<u>96</u> = 9600 BAUD
02	RS 232 ECHO MODE	<u>0</u> = OFF
02	NO 232 EGNO PRIDE	1 = ON
03	TAPE STOP WITH TRANSPARENT TAPE	<u>0</u> = OFF
0.5	TAPE STOP WITH TRANSPARENT TAPE	1 = ON
04	MONO/STEREO CHANGEOVER switches automatically to mono	<u>0</u> = OFF
04	at speed 3.75 and 7.5 ips	1 = ON
05	COUNTER STOP IN DUMP MODE	<u>0</u> = 0FF
	COUNTER STOP IN DOMP MODE	1 = ON
06	RETURN OF PINCH ROLLER	<u>0</u> = OFF
00	(when no tape is loaded)	1 = ON
07	SPEED CHANGE	0 = DIRECT SPEED CHANGE 1 = SPEED CHANGE WITH SHIFT ONLY
08	TAPE DUMP MODE	<pre>0 = KEY "TAPE DUMP" PRE- SELECTS FUNCTION, ACTIVATION WITH "PLAY" 1 = DIRECT ACTIVATION</pre>
09	MODE ASSIGNMENT SOFTKEY 1 (Default status = 1)	0 = LOOP 1 = LOC START 2 = LOC 2 3 = LOC 3 4 = BACKSPACE
10	MODE ASSIGNMENT SOFTKEY 2 (Default status = 4)	5 = FADER READY 6 = LIFTER AS MOMENTARY KEY 7 = LIFTER FLIP-FLOP KEY 8 = REHEARSE
11	RECORD COMMAND DEFINITION	<pre>0 = KEY "REC" AND "PLAY"     TO BE PRESSED     TOGETHER 1 = IF MACHINE IN PLAY,     PRESS "REC" ONLY</pre>
12	FADER START DEFINITION	$\frac{0}{1} = A$ $\frac{0}{1} = B$ (see truth table $\frac{0}{1} = B$ on following page) $\frac{0}{1} = B$

The underlined settings in the status field are the default values.

EDITION: 6. Februar 1990

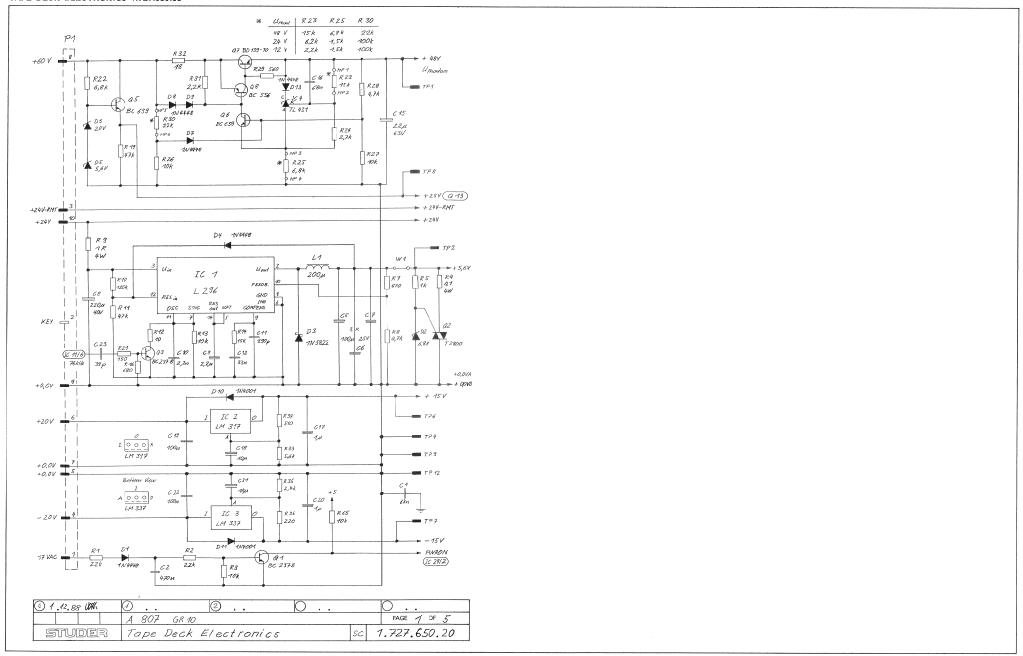
### Software jumpers:

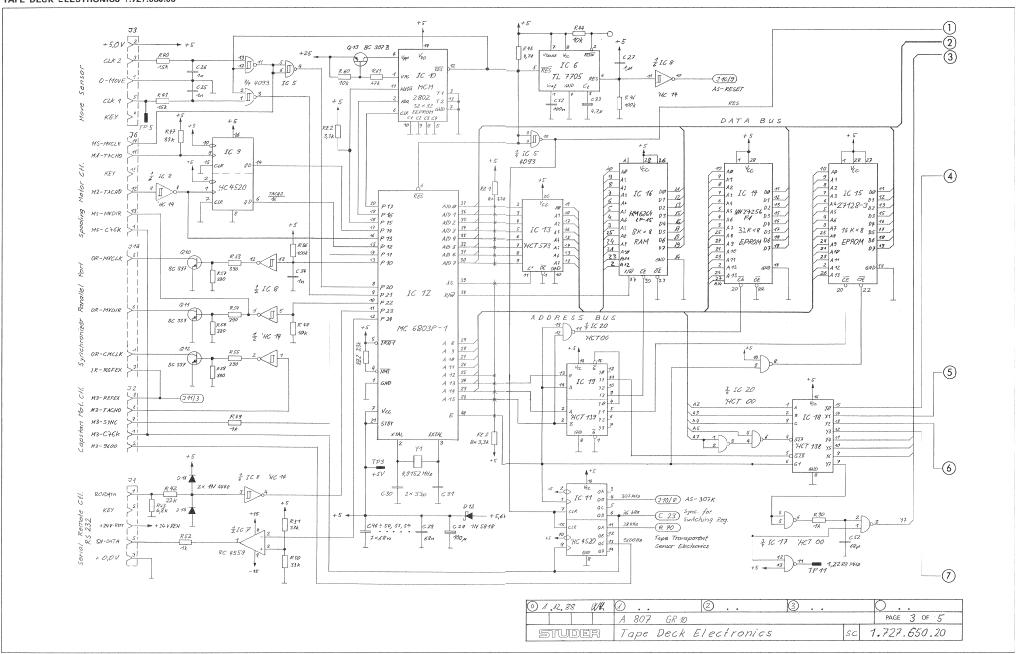
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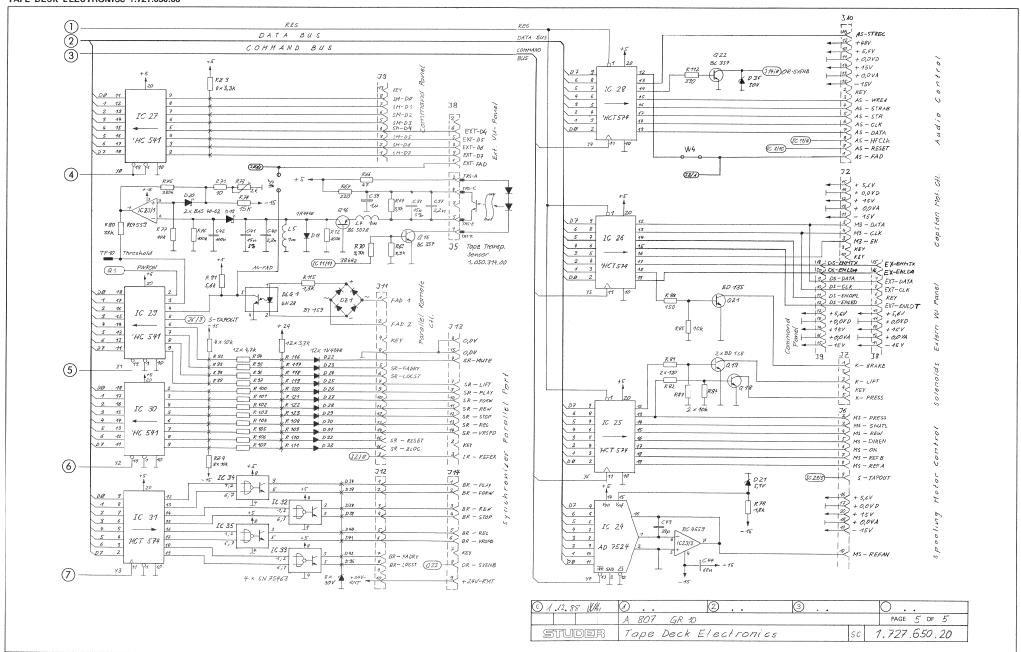
JUMPER			STATUS		
13	MODE ASSIGNMENT OF	2 CHANNEL VERSION			
13	AUDIO SOFT KEY	4 CHANNEL VERSION	$\frac{0}{1} = CCIR$ $\frac{0}{1} = NAB$		
		TC 1/4" VERSION	0 = TAPE A/B CCIR 1 = TAPE A/B NAB 4 = CHANGE EQUALIZATION CCIR/NAB		
14	CHANNEL CONTROL		not yet implemented		
15	LOCAL TIME CODE UNIT ELECTRONICS		0 = ACTIVE 1 = BYPASSED		
16	TIME CODE REFERENCE IN REPRO/SYNC MODE  *not available in 2-channe	el versions	0 = NO REFERENCE 1 = CHANNEL 1 2 = CHANNEL 2* 3 = CHANNEL 3* 4 = CHANNEL 4		

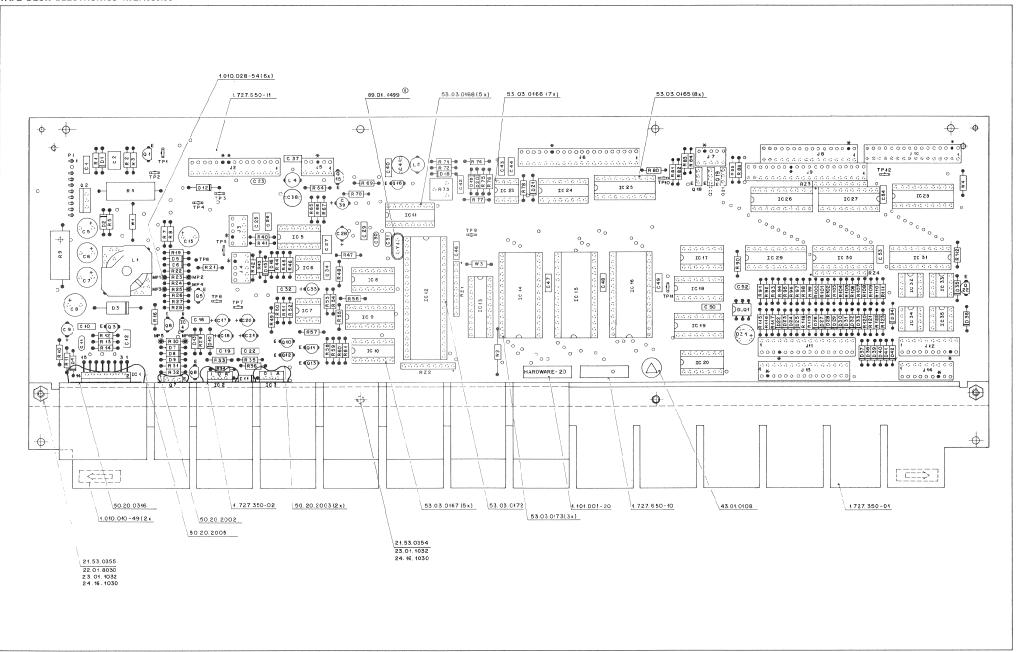
### **FADER MODE TRUTH TABLE:**

FADER MODE	Α	В	С	D
FADER READY KEY REQUIRED				
FADER READY KEY NOT REQUIRED				
INTERNAL MONITOR MUTED			8	
FADER CLOSED: TRANSPORT DECK KEYS ENABLED: TRANSPORT DECK KEYS DISABLED	10	8	8	88
FADER OPEN: TRANSPORT DECK KEYS ENABLED: TRANSPORT DECK KEYS DISABLED	-		120	8

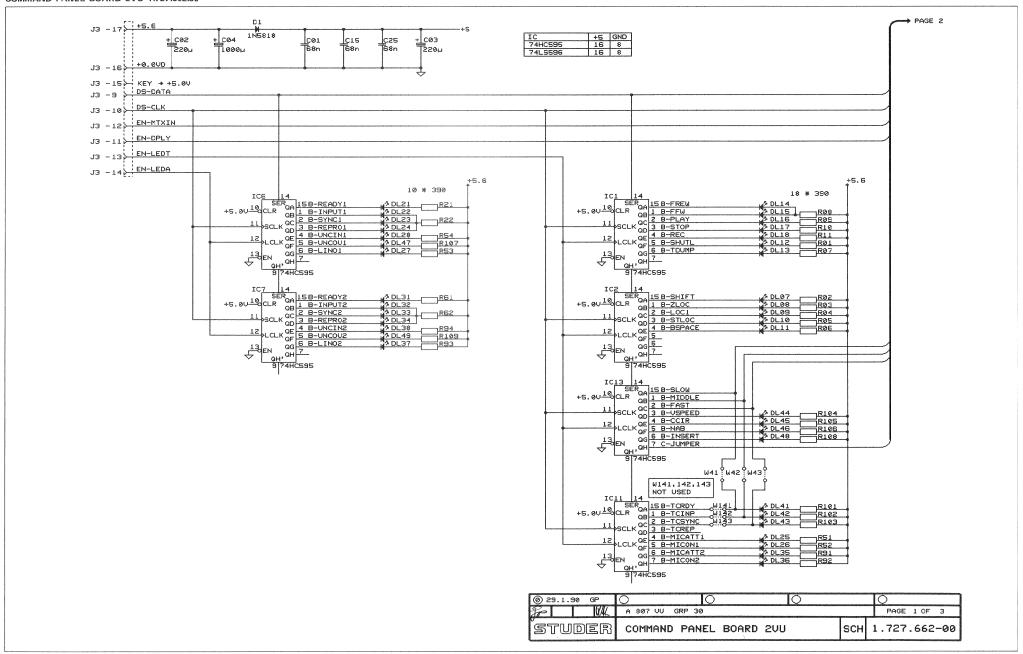




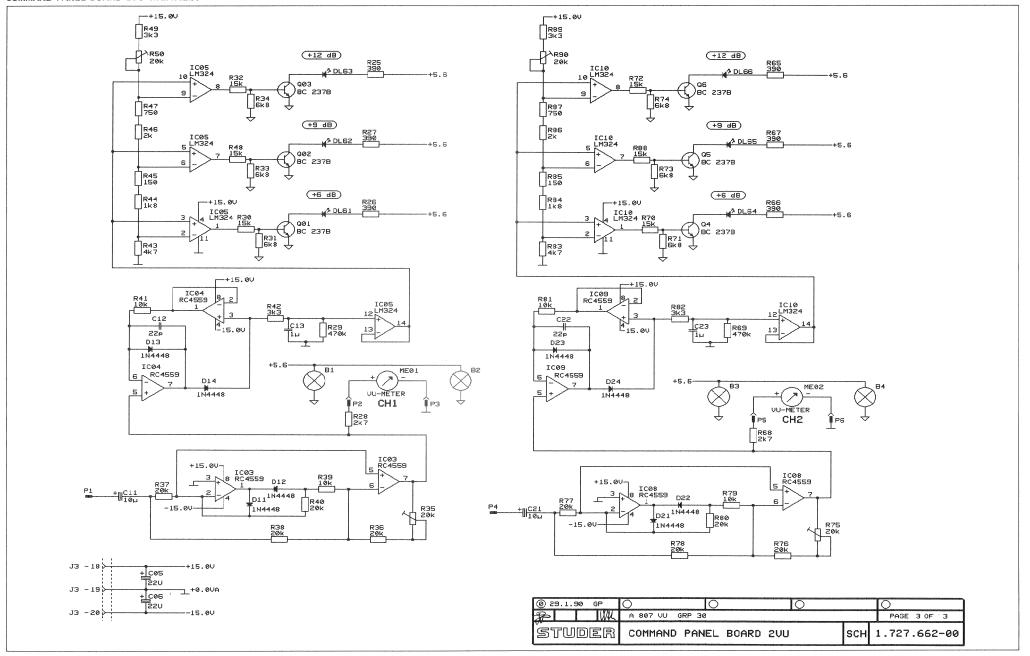


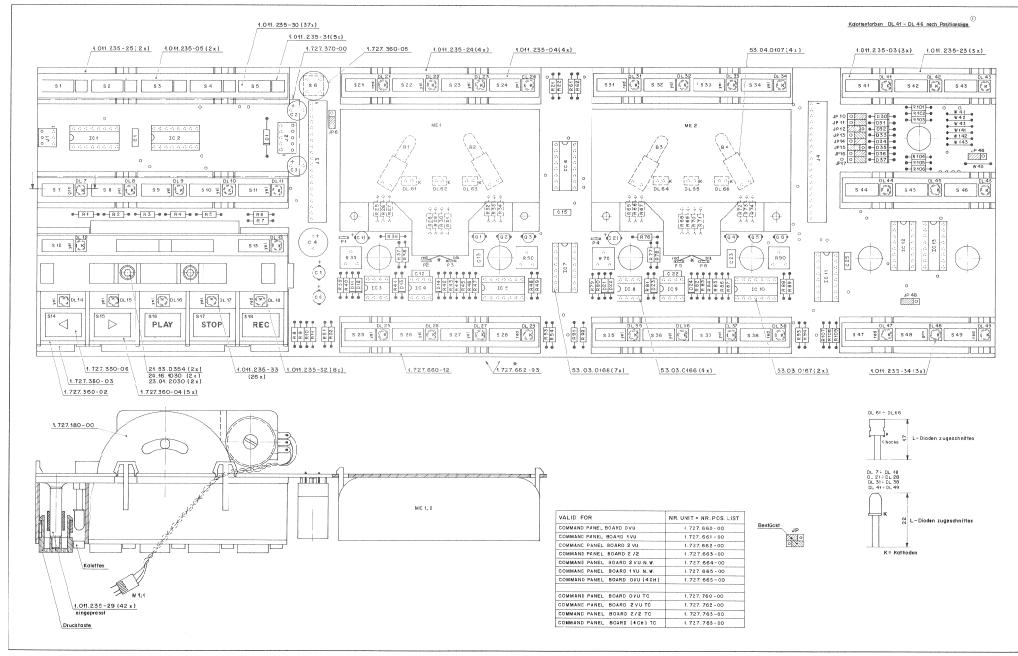


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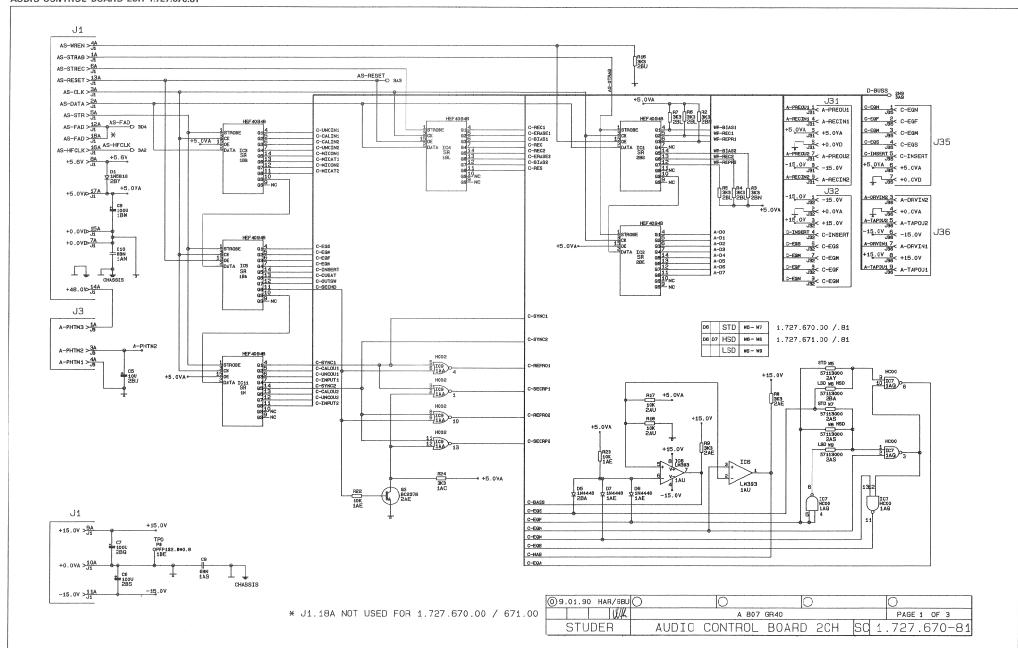


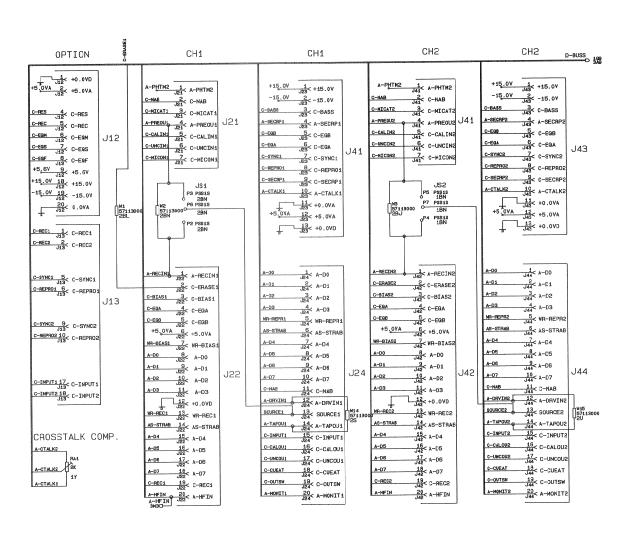
#### COMMAND PANEL BOARD 2VU 1.727.662.00 PAGE 1 4 DATA CLK EN-MTXIN EN-DFLY B-FAST J1 -2 CLEAR SCLK LČLK EΝ DISPLAY BOARD 14 SER IC12 74LS596 QH' B-MIDDLE 1.727.370.00 QD QG QH QB QE B-SLOW QA QC -√ J1 D37 JP17 READY1 C-JUMPER INPUT1 REPRO1 UNCIN1 UNC0U1 LINON1 MI CON1 SYNC1 251 522 523 V S24 528 D7 | J3 -8 J4 -8 ₽ UNCOUZ 549 READY2 INPUT2 SYNC2 REPRO2 UNC IN2 LIN0N2 MICONZ 538 4 537 47 231 235 233 S34 D6 J3 -7 D35 JP15 CCIR MICAT1 D5 J4 -6 .13 -6 W45 D34 JP14 S46 NAB S35 MICATZ) D4 J4 -5 J3 -5 STEP SØ5 RESET VARISPD pss / LAP SET S@1 502 503 504 506\_ 544 ADJUST SLOW ? . J3 −4 JP48 D32 JP12 LOC 1 509 LOCSTRT MIDDLE S42 SHIFT ZEROLOC BSPACE SHUTTLE 512 510 211 INSERT DZ J4 -3 13 -3 REC S18 FAST S43 REW FFWD PLAY STOP TOUMP 516 J4 -2 J3 - 2 1D30 | JP10 J4 -1 J4 -20 -+5.6 J4 -19 -+0.00D J4 −18 HEY KEY @ 29.1.90 GP 0 A 807 VU GRP 30 PAGE 2 OF 3 STUDER COMMAND PANEL BOARD 2VU SCH 1.727.662-00



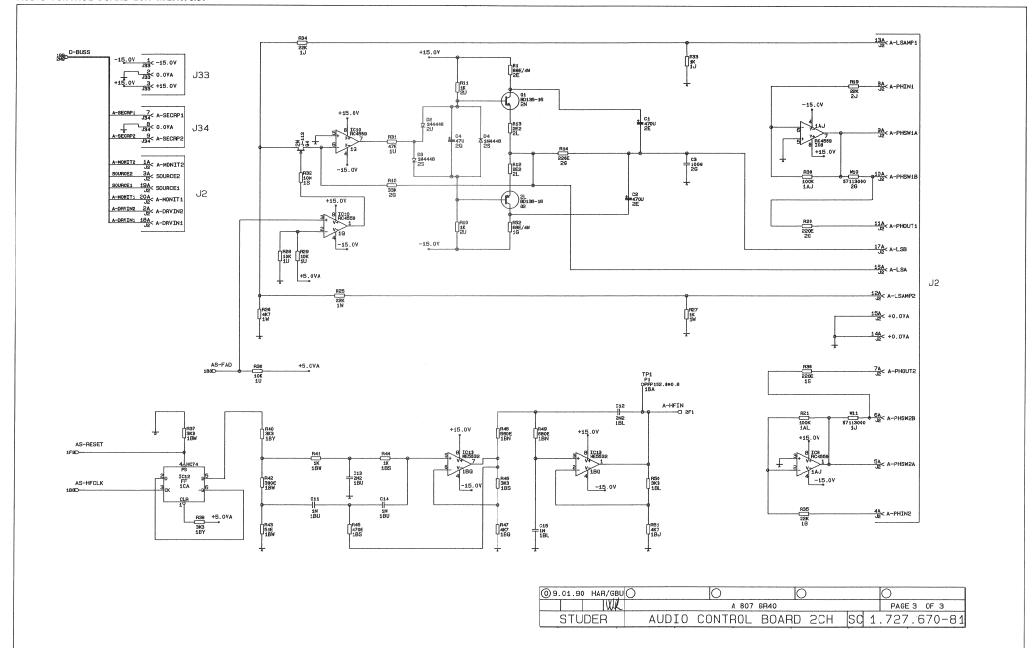


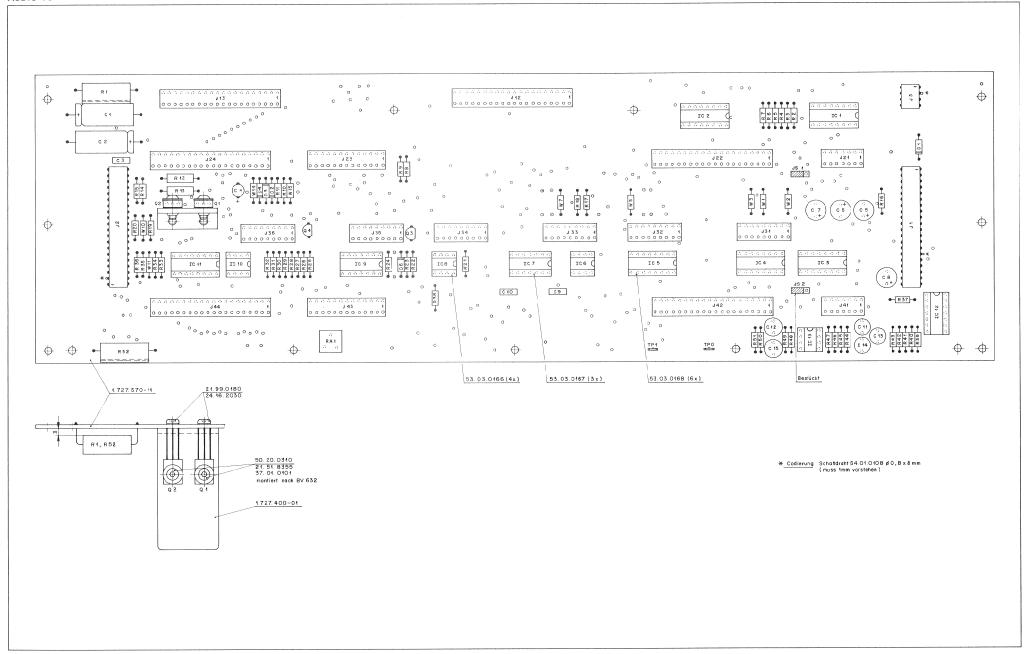
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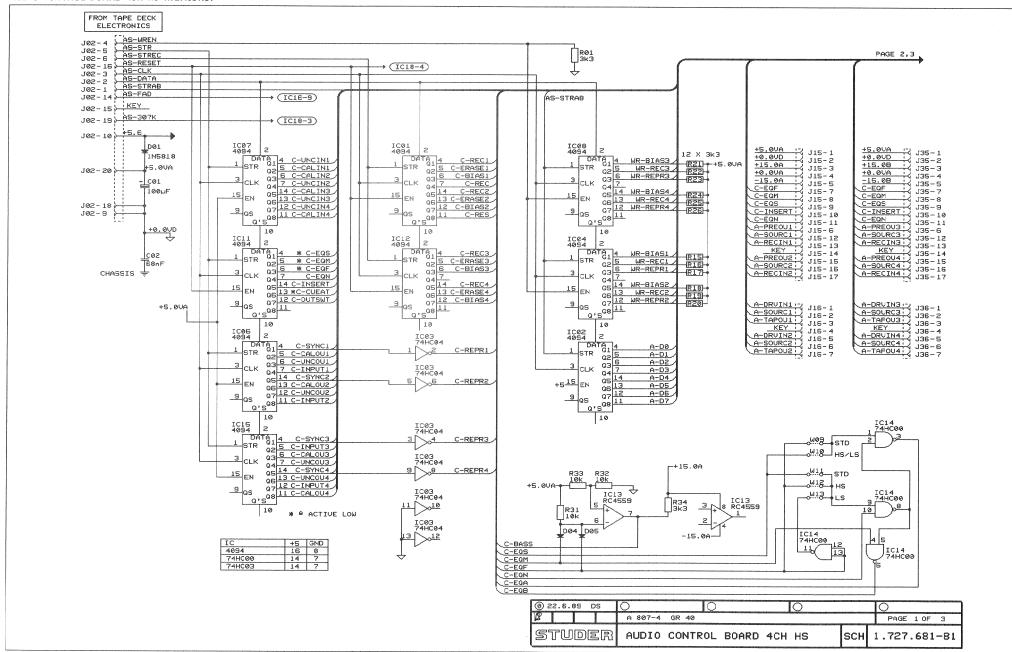
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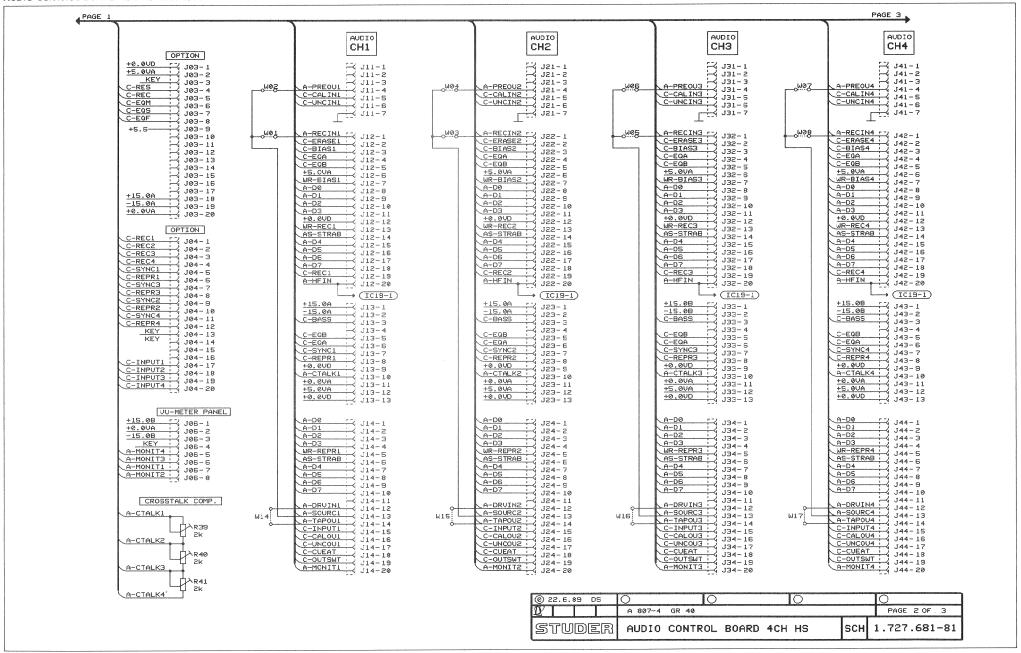


50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.05.0283 50.17.1000 50.09.0107 50.17.1002 50.09.0107 50.07.0018 50.17.1074	VALUE  470 uF 470 uF 470 uF 470 uF 0.1 uF 47 uF 100 uF 110 uF 110 uF 110 uF 120 uF 110 uF 110 uF 120 uF 120 uF 120 uF 130 uF 147 uF 168	SPECIFICATIONS / E  CIS Socket Strip CIS Socket Strip CIS Socket Strip non used strip CIS Socket Strip	PL 1.727.670.00	MANUF.  Mot	IND.	POS.NO.  R36 R37 R38 R39 R40 R41 R45 R45 R46 R47 R48 R49	PART NO.  57.11.3221 57.11.3025 57.11.3104 57.11.3332 57.11.3332 57.11.3332 57.11.3332 57.11.3332 57.11.3347 57.11.391 57.11.391 57.11.391 57.11.391 57.11.391 57.11.392 57.11.3472 57.11.392 57.11.392 57.11.392 57.11.392 57.11.3932 57.11.3932 57.11.3932 57.11.3932 57.11.3932 57.11.3932 57.11.3932 57.11.3933 57.11.3933 57.11.3933 57.11.3933 57.11.3933 57.11.3933 57.11.3933 57.11.3933 57.11.3933 57.11.3933	VALUE  220 Ohm 3.3 kOhm 100 kOhm 3.3 kOhm 1 kOhm 5.1 kOhm 5.1 kOhm 6.1 kOhm 6.7 kOhm 6.7 kOhm 6.7 kOhm 6.8 kOhm 1.8 kOhm 6.8 kOhm 7.8 kOhm 8.9 kOhm 8.0 kOhm	2X, 0.25W, MF 2X	PL 1.727.670.00	HANN PAGE
59, 25, 3471 59, 06, 0104 59, 22, 3470 59, 22, 3470 59, 22, 3470 59, 22, 3101 59, 22, 3101 59, 22, 5101 59, 06, 0683 59, 06, 1102 59, 05, 1102 59, 05, 1102 59, 05, 1102 59, 05, 1102 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 07, 0018 50, 0	470 uF 47	-20X 16 V E	PL 1.727.670.00	Mot Mot Mot Mot Mot Fage 1		R37 R38 R39 R40 R40 R42 R42 R45 R45 R46 R47 R46 R47 R46 R47 R49 R47 R49 R47 R49 R49 R51 M51 M.	57.11.302 57.11.3104 57.11.304 57.11.332 57.11.3332 57.11.3332 57.11.3351 57.11.3510 57.11.3510 57.11.3510 57.11.3510 57.11.3510 57.11.3510 57.11.3612 57.11.362 57.11.372 57.11.372 57.11.392 57.11.392 57.11.392 57.11.3932 57.11.3932 57.11.3932 57.11.3932 57.11.3930 57.11.3900 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000	3.3 kOhm 1.00 kOhm 3.3 kOhm 3.3 kOhm 1.0 kOhm 5.1 kOhm 5.1 kOhm 4.7 kOhm 6.0 kOhm 6.0 kOhm 2.2 kOhm 2 kOhm A.7 kOhm 6.1 kOhm 6.2 kOhm 6.3 kOhm 6.3 kOhm 6.5 kOhm	2X. 0.25W, MF 2X		
59, 22, 3470 59, 22, 8100 59, 22, 8100 59, 22, 8100 59, 22, 5101 59, 22, 5101 59, 22, 5101 59, 22, 5101 59, 22, 5101 59, 22, 5101 59, 26, 683 59, 06, 683 59, 06, 102 59, 05, 1102 59, 05, 1222 59, 05, 1102 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 07, 0018 50, 07,	47 uF 10 uF 10 uF 100 u	-20X 10 V EL -20X 63 V EL -20X 25 V EL -20X 26 V PET 10X 63 V PET 10X 63 V PET 11X 160 V PP 11X	PL 1.727.670.00	Mot Mot Mot Mot Mot Fage 1		R90 R40 R41 R42 R42 R44 R45 R46 R47 R48 R49 R51 R49 R51 R49 R51 R5	57.11.3322 57.11.3322 57.11.3322 57.11.3391 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 57.11.3913 58.01.8202 54.02.0320 54.02.0320 54.02.0320 55.01.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000	3.3 kOhm 3.3 kOhm 1 kOhm 3.90 Ohm 5.1 kOhm 6.1 kOhm 6.2 kOhm 6.3 kOhm 6.3 kOhm 6.4 kOhm 6.5 kOhm 6.7 kOhm 6.8 kOhm 6.8 kOhm 6.9 kOhm 6.9 kOhm 6.9 kOhm 6.9 kOhm 6.1 kOhm 6.1 kOhm 6.1 kOhm 6.2 kOhm 6.3 kOhm 6.3 kOhm 6.3 kOhm 6.3 kOhm 6.3 kOhm 6.4 kOhm 6.5 k	2X, 0.25W, MF 2X, 0.25W, MF 2X, 0.25W, MF 2X, 0.25W, MF 12X, 0.25W, MF 12X, 0.25W, MF 2X, 0.25W, MF		
59, 22, 5101 59, 22, 5101 59, 22, 5101 59, 26, 0683 59, 06, 0683 59, 06, 0683 59, 05, 1222 59, 05, 1222 59, 05, 1222 59, 05, 1102 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 07, 0018 50, 0	100 uF 100 uF 100 uF 68 nF 68 nF 68 nF 100 uF 100 u	-20X 25 V EL   -70X 27 V EL   10X 63 V PET   11X 60 V PET   11X 160 V PET   11	PL 1.727.670.00	Mot Mot Mot Mot Mot Fage 1		R	57.11.391 57.11.3510 57.11.3102 57.11.3102 57.11.3471 57.11.3471 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3472 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000	390 Ohm 51 Ohm 1 kOhm 470 Ohm 3.7 kOhm 560 Ohm 660 Ohm 660 Ohm 67 kOhm 2 kOhm 1 kOhm 2 kOhm	2X, 0.25W, MF 12, 0.25W, MF 2X, 4 W, DR Potmeter PMG PLUG 2.8A0.8 Wire Bridge		
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59, 05, 1222 59, 05, 1102 59, 05, 1102 59, 05, 1102 59, 05, 1102 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 04, 0125 50, 07, 0018 50, 0	2.2 PF 1 uF 1 u	12 160 V PP 18 100		Mot Mot Mot Mot Mot Fage 1		R48 R49 R50 R51 H52 RA1 TP0 TP1 W2 W3 W52 W3 W50 W10 W10 W11 W11 W12 W11 W14 W15 XILL1	57.11.3561 57.11.3601 57.11.3601 57.11.3612 57.10.50.5000 58.01.8202 54.02.0320 54.02.0320 54.02.0320 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000 57.11.3000	560 Ohm 600 Ohm 3.3 kOhm 4.7 kOhm 60 Ohm 2 kOhm AUDIO CONTI	2X, O.25W, MF 2X, O.25W, MF 2X, O.25W, MF 2X, O.25W, MF 2X, 4 W, DR Potmeter PMG PLUG 2.840.8 PLUG 2.840.8 PLUG 2.840.8 PLUG 2.840.8 PLUG 2.840.8 PLUG 2.840.8 Wire Bridge Wire Bridge Wire Bridge Mire Bridge Mire Bridge Mire Bridge Mire Bridge Mire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Mire Bridge Mire Bridge Mire Bridge Wire Bridge		
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50.17.1000 50.09.0107 50.17.1002 50.09.0107 50.17.1007 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.0018	7-HICOO RC4559 7-HICOO RC4559 7-HICOO RC4559 7-HICOO RC4559 7-HICOO RC4559 7-HICOO RC4559 8-HICOO RC4559 8-HICO	HCMOS Dual Op. Amp. HCMOS Op. Amp. CMOS HCMOS Dual Op. Amp.  CIS Socket Strip		PAGE 1  HANUF.  AMP		W9 W10 W11 W14 W15 XIC1 DER (06	57.11.3000 57.11.3000 57.11.3000 53.03.0168 0) 89/03/21 Wth	AUDIO CONTE	not used Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket		
50.09.0307 50.07.0018 50.17.1074 50.09.0105 50.89/03/21 Wth  PART NO.  54.01.0248 54.01.0248 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0227 54.01.0227	RC4-359 MCI-4094 748C74 NAS5-32 AUDIO CONTRI VALUE 20-POLE 20-	Dual Op. Amp. CMOS SHOMOS BOMOS  CL BOARD  CL BOARD  CL Socket Strip CLS Socket Strip		PAGE 1  HANUF.  AMP		W14 W15 XIC1 DER (00	57.11.3000 57.11.3000 53.03.0168 0) 89/03/21 Wth	AUDIO CONTE	Wire Bridge Wire Bridge IC Socket COL BOARD		
50.09.0105  D) 89/03/21 Wth  PART NO.  54.01.0248 54.01.0246 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0227 54.01.0227 54.01.0227 54.01.0227 54.01.0227	VALUE  VALUE  20-POLE 20-POLE 4-POLE 20-POLE 7-POLE 20-POLE 13-POLE 20-POLE	Dual Op. Amp.  OL BOARD  SPECIFICATIONS / E  CIS Socket Strip CIS Socket Strip CIS Socket Strip not used CIS Socket Strip		MANUF.  AMP AMP		DER (O	0) 89/03/21 Wth	AUDIO CONTE	ROL BOARD		
FART NO.  54.01.0248 54.01.0248 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0217 54.01.0217 54.01.0217 54.01.0217	VALUE  20-POLE 20-POLE 4-POLE 20-POLE 7-POLE 20-POLE 13-POLE 20-POLE	SPECIFICATIONS / E  CIS Socket Strip CIS Socket Strip CIS Socket Strip non used strip CIS Socket Strip		MANUF.  AMP AMP							
54.01.0248 54.01.0248 54.01.0304 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0225 54.01.0227 54.01.0217 54.01.0217	20-FOLE 20-POLE 4-POLE 20-POLE 20-POLE 7-FOLE 20-POLE 13-POLE	CIS Socket Strip CIS Socket Strip not used CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	QUIVALENT	AMP AMP	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS /	/ EQUIVALENT	MAN
54.01.0248 54.01.0304 54.01.0226 54.01.0226 54.01.0226 54.01.0226 54.01.0225 54.01.0227 54.01.0217 54.01.0217 54.01.0217	20-POLE 4-POLE 20-POLE 20-POLE 7-POLE 20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip not used CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP							
54.01.0226 54.01.0226 54.01.0210 54.01.0226 54.01.0229 54.01.0226 54.01.0217 54.01.0217 54.01.0217 54.01.0217	20-POLE 20-POLE 7-FOLE 20-POLE 13-POLE 20-POLE	not used CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		*****		XIC2 XIC3 XIC4	53.03.0168 53.03.0168 53.03.0168	16 pol 16 pol 16 pol	IC Socket IC Socket IC Socket		
54.01.0210 54.01.0226 54.01.0292 54.01.0226 54.01.0217 54.01.0217 54.01.0217 54.01.0217	7-FOLE 20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip		AMP		XIC5 XIC6 XIC7	53.03.0168 53.03.0166 53.03.0167	16 pol 8 pol 14 pol	IC Socket IC Socket IC Socket		
54.01.0226 54.01.0217 54.01.0217 54.01.0217 54.01.0217	20-POLE	CIS Socket Strip		AHP AMP AMP		XIC9 XIC10	53.03.0166 53.03.0167 53.03.0166	8 pol 14 pol 8 pol	IC Socket IC Socket IC Socket		
54.01.0217 54.01.0217	9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP		XIC11 XIC12 XIC13	53.03.0168 53.03.0167 53.03.0166	16 pol 14 pol 8 pol	IC Socket IC Socket IC Socket		
	9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP		ALC13	33.03.0100	0 poi	20 00000		
54.01.0217 54.01.0218 54.01.0226	9-POLE 7-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP							
54.01.0292 54.01.0226	13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP							
54.01.0021 54.01.0021		Bridge Bridge									
1.727.670.11 1.727.400.01 1.727.670.10	1 pce 1 pce 1 pce	Headsink No. label	3	St St St							
21.99.0180 21.53.0355 24.16.2030	2 pcs	Screw M3 * 5 Screw M3 * 8 Lock wacher									
37.01.0101 43.01.0108 54.01.0020	4 pcs 1 pce 6 pcs	Lock wacher ESE warning label Contact pin		St St	EL=Ele PETP=P	ctrolytic,	PP=Polypropylen	, SI=Silicon	, MF=Metal Film		
50.03.0495 50.03.0510	BD135-16 BD136-16		NPN PNP				Motorola, St=St	uder, Six=Si	liconix		
				PAGE 2			) 89/03/21 Wth	AUDIO CONTR	OL BOARD	PL 1.727.670.00	PAGE
0) 89/03/21 Wth	AUDIO CONTR	OL BOARD	PL 1.727.670.00	PAGE 2	STU	DER (OC	0) 89/03/21 Wth	AUDIO CONTR	OL BOARD	FL 1.727.670.00	PAG
PART NO.				MANUF.							
57.56.5680	68 Ohm	2%, 4 W, DR	FET	Mot/Six							
57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3332 57.11.3102	3.3 kUhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.13.4229 57.13.4229	2.2 Ohm 2.2 Ohm	2%, 0.5 W, MF 2%, 0.5 W, MF									
57.11.3333 57.11.3332	33 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3103 57.11.3223	10 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3104 57.11.3103	100 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3332 57.11.3223	3.3 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3102 57.11.3103	1 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
57.11.3103 57.11.3470	10 k0hm 47 Ohm	2% 0.25W, MF 2%, 0.25W, MF									
57.11.3102 57.11.3223	1 kOhm 22 kOhm	2%, 0.25W, Mf 2%, 0.25W, MF									
57.11.3223			PL 1.727.670.00	PAGE 3							
•	54.01.0021 1.727.400.01 1.727.4	54.01.0021  1.727.670.11  1.727.670.11  1.727.400.10  1.727.400.10  1.727.400.10  1.727.400.10  1.727.400.10  1.727.400.10  1.727.400.10  1.727.400.10  1.727.400.10  2.728.70	54.01.0021	54.01.0021	Section	54.01.0021 Bridge  1.727.407.011 1 pce Audio Control PCB St 1.727.407.01 1 pce Headsink St 2.1.727.407.01 1 pce Headsink St 2.1.727.407.407.01 1 pce Headsink St 2.1.727.407.407.407.407.407.407.407.407.407.40	54.01.0021	1,77,670.10   1   pee	194.01.0021   Bridge   Audio Control PCB   St   1.727.4700.01   1 pce   Nudio Control PCB   St   1.727.4700.01   1 pce   Nudio Control PCB   St   1.727.4700.01   1 pce   Nudio Control PCB   St   1.727.4700.01   1 pce   Nuclear   Nuclear   St   1.727.4700.01   1 pce   Nuclear   Nuclear   St   1.727.4700.00   1 pce   Screw   M3 A St   1.727.4700.00   2 pce   Screw	34.01.0021   Bridge   Bridge	Satisface

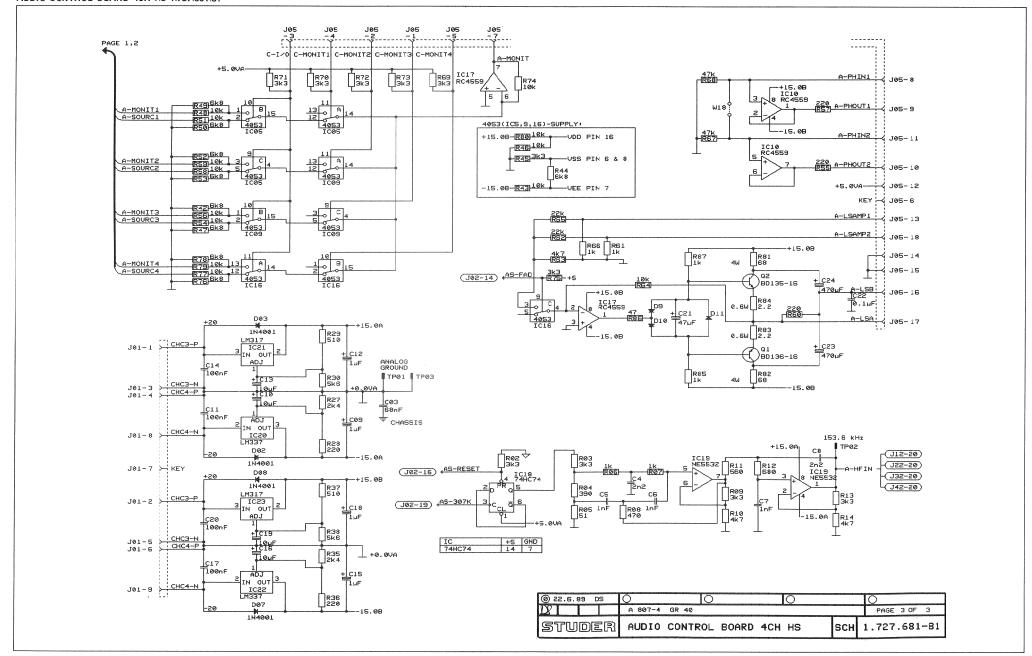
#### AUDIO CONTROL BOARD 4CH HS 1.727.681.81



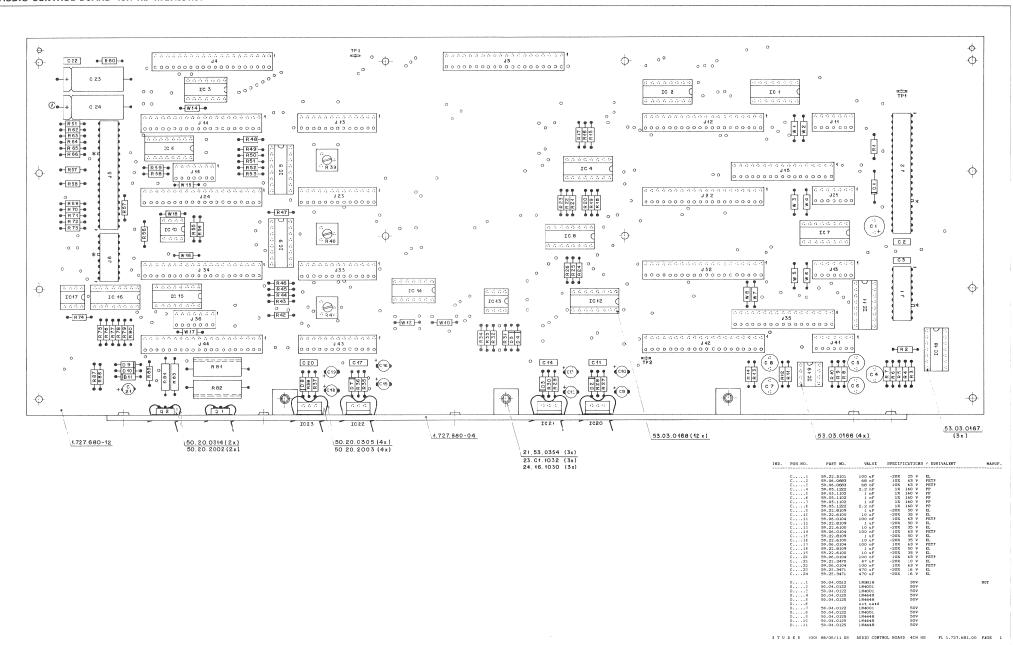
#### AUDIO CONTROL BOARD 4CH HS 1.727.681.81



#### AUDIO CONTROL BOARD 4CH HS 1,727,681.81



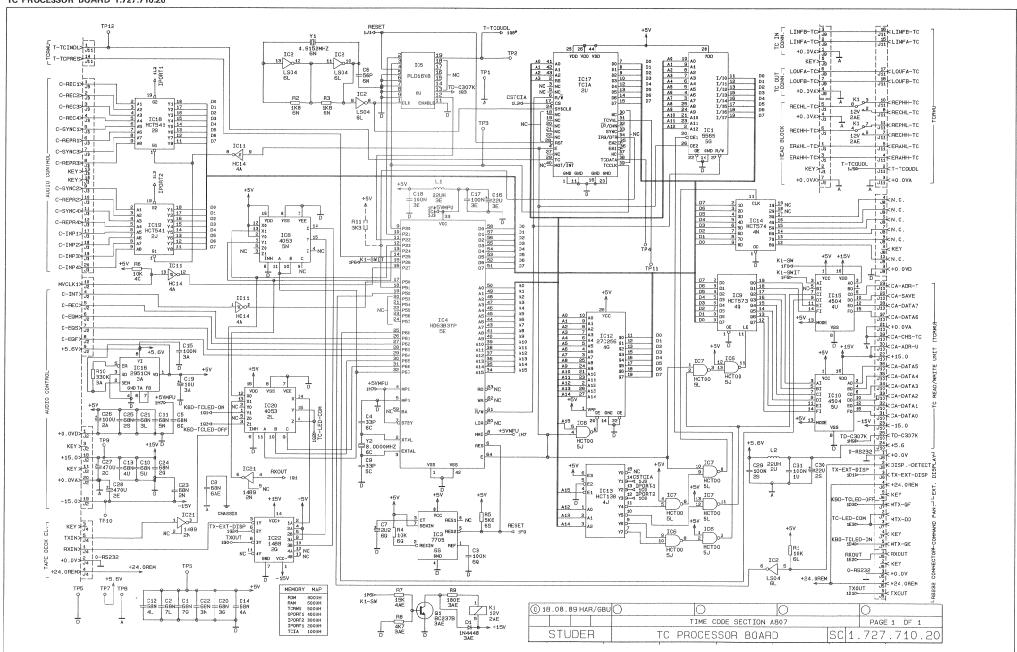
### AUDIO CONTROL BOARD 4CH HS 1.727.681.81



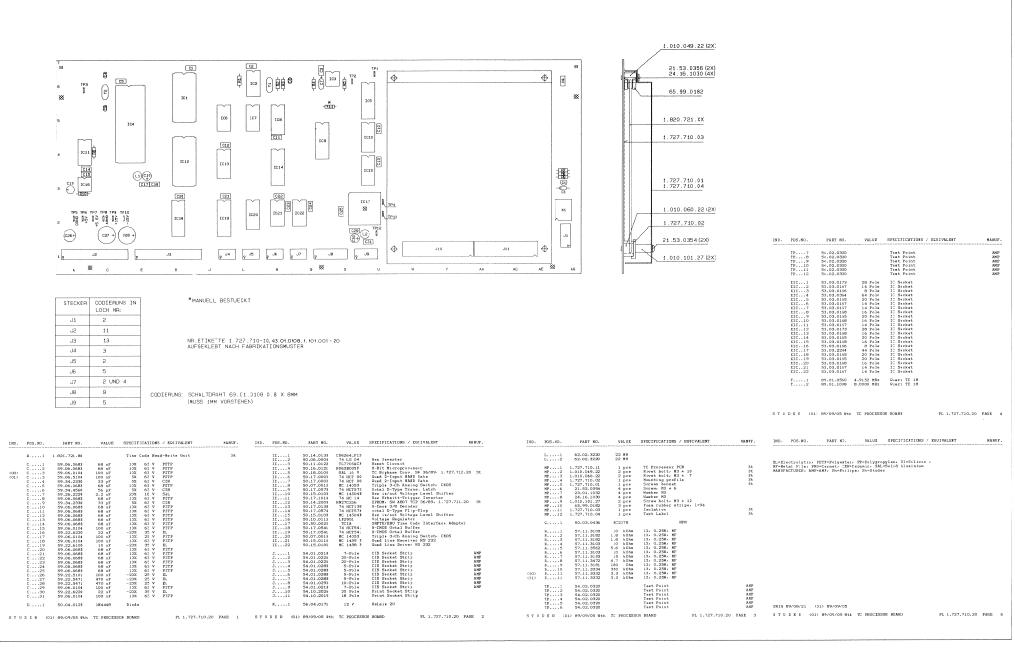
### AUDIO CONTROL BOARD 4CH HS 1.727.681.81

	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	м,
	IC1 IC2	50.07.0018 50.07.0018	MC14094 MC14094	8-Bit Shift/Store Register CMOS 8-Bit Shift/Store Register CMOS	MOT		R47 R48	57.11.3682 57.11.3103	6.8 kOhn 10 kOhn	1%, 0.25W, MF 1%, 0.25W, MF	
	IC3 IC4 IC5	50.17.1004 50.07.0018 50.07.0015	74HC04 MC14094 MC14053	Hex Inverter HCMOS 8-Bit Shift/Store Register CMOS Triple 2-Ch Analog Multiplexer	MOT		R50 R51	57.11.3682 57.11.3682 57.11.3103	6.8 kOhm 6.8 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	IC6 IC7	50.07.0018 50.07.0018 50.07.0018	MC14094 MC14094 MC14094	8-Bit Shift/Store Register CMOS 8-Bit Shift/Store Register CMOS 8-Bit Shift/Store Register CMOS	MOT MOT MOT		R52 R53 R54	57.11.3682 57.11.3682 57.11.3103	6.8 kOhm 6.8 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	IC9 IC10	50.07.0015 50.09.0107	MC14053 RC4559	Triple 2-Ch Analog Multiplexer Dual OpAmp O-Dit Shift/Store Register CMOS	MOT RCA		R55 R56	57.11.3221 57.11.3103 57.11.3221	220 Ohm 10 kOhm 220 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	IC11 IC12 IC13	50.07.0018 50.07.0018 50.09.0107	MC14094 MC14094 RC4559	8-Bit Shift/Store Register CMOS Dual OpAmp	MOT RCA		R57 R58 R59	57.11.3103 57.11.3103	10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	
	IC14 IC15 IC16	50.17.1000 50.07.0018 50.07.0015	74HC00 MC14094 MC14053	Quad MAND-Gate HCMOS 8-Bit Shift/Store Register CMOS Triple 2-Ch Analog Multiplexer	HOT HOT		R60 R61 R62	57.11.3221 57.11.3102 57.11.3223	220 Ohm 1 kOhm 22 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF	
	IC17 IC18 IC19	50.09.0107 50.17.1074 50.09.0105	RC4559 74HC74 NE 5532	Dual OpAmp Dual D-Flin-Flon	RCA NS		R63 R64 R65	57.11.3472 57.11.3103 57.11.3223	4.7 kUhm 10 kOhm 22 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF	
	IC20 IC21 IC22	50.10.0105 50.10.0104 50.10.0105	LM 337 LM 317 LM 337	Dual OpAmp Low Noise Negative Voltage Regulator Positive Voltage Regulator Negative Voltage Regulator			R66 R67 R68	57.11.3102 57.11.3473 57.11.3473	1 kOhm 47 kOhm 47 kOhn	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	IC23 J1	50.10.0104	LM 317 9-Pole	Positive Voltage Regulator CIS Socket Strip	AMP		R69 R70 R71	57.11.3332 57.11.3332 57.11.3332	3.3 kOhn 3.3 kOhn 3.3 kOhn	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	J2 J3	54.01.0248 54.01.0226 54.01.0226	20-Pole 20-Pole 20-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R72 R73 R74	57.11.3332 57.11.3332 57.11.3103	3.3 kOhn 3.3 kOhn 10 kOhn	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF	
	J4 J5 J6	54.01.0247 54.01.0306	18-Pole 8-Pole	CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R75 R76	57.11.3332 57.11.3682	3.3 kOhm 6.8 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF	
	J11 J12 J13	54.01.0218 54.01.0226 54.01.0292	7-Pole 20-Pole 13-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP		R77 R78 R79	57.11.3103 57.11.3682 57.11.3103	10 k0hm 6.8 k0hm 10 k0hm	1%, 0.25W, MF 1%, 0.25W, MF	
	J14 J15 J16	54.01.0226 54.01.0295 54.01.0218	20-Pole 17-Pole 7-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	amp amp amp		R80 R81 R82	57.11.3103 57.56.5680 57.56.5680	10 kOhn 68 Ohn 68 Ohn	1%, 0.25%, MF 1%, 4 W DR 1%, 4 W DR	
U I	J21	54.01.0218 ) 88/08/11 DS	7-Pole	CIS Socket Strip ROL BOARD 4CH HS PL 1.727.681.00	AMP PAGE 2	STU	R83	57.13.4229 0) 88/08/11 DS	2.2 Ohm AUDIO CONT	1%, 0.5 W, MF ROL BOARD 4CH HS PL 1.727	7.681.00 PAG
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA
	J22 J23	54.01.0226 54.01.0292	20-Pole 13-Pole	CIS Socket Strip CIS Socket Strip	AMP AMP		R84 R85	57.13.4229 57.11.3102	2.2 Ohm 1 kOhm	1%, 0.5 W, MF 1%, 0.25W, MF	
	J24 J31 J32	54.01.0226 54.01.0218 54.01.0226	20-Pole 7-Pole 20-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R86 R87	57.11.3470 57.11.3102	47 Ohm 1 kOhm	1%, 0.25W, HF 1%, 0.25W, HF	
	J33 J34 J35	54.01.0292 54.01.0226 54.01.0295	13-Pole 20-Pole 17-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		TP1 TP2 TP3	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	
	J36 J41 J42	54.01.0218 54.01.0218 54.01.0226	7-Pole 7-Pole 20-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		W1 W2	57.11.3000 57.11.3000		Wire Bridge Wire Bridge	
	J43 J44	54.01.0228 54.01.0226	13-Pole 20-Pole	CIS Socket Strip CIS Socket Strip	AMP AMP		₩3 ₩4 ₩5	57.11.3000 57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge	
	MP1 MP2	21.53.0354	3 pcs	Screw IS M3*6 Washer D 3.2/6*0.5			W6 W7	57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge	
	MP4 MP1	24.16.1030 43.01.0108 50.20.0305	3 pcs 1 pcs 4 pcs	Washer D 3.2/5.5 ESE-Warning Label Thermoplastic TO220			W8 W9 W10	57.11.3000 57.11.3000		not used Wire Bridge	
	MP2 MP3 MP4	50.20.0314 50.20.2002 50.20.2003	2 pcs 2 pcs 4 pcs	Thermoplastic T0126 Mounting clip T0126 Mounting clip T0220			W11 W12 W13	57.11.3000		not used Wire Bridge not used	
	MP6	1.727.680.11 1.727.680.10	1 pce 1 pce	AUDIO CONTROL PCB 4CH Nr. Label	ST ST		W14 W15 W16	57.11.3000 57.11.3000 57.11.3000		Wire Bridge Wire Bridge Wire Bridge	
	Q1 Q2	50.03.0510 50.03.0495	BD136-16 BD135-16	PNP NPN			W17 W18	57.11.3000 57.11.3000		Wire Bridge Wire Bridge	
	R1 R2 R3	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC1 XIC2 XIC3	53.03.0168 53.03.0168 53.03.0167		16-Pole IC Socket 16-Pole IC Socket 14-Pole IC Socket	
	R5 R6	57.11.3391 57.11.3510 57.11.3102	390 Ohm 51 Ohm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC4 XIC5 XIC6	53.03.0168 53.03.0168 53.03.0168		16-Pole IC Socket 16-Pole IC Socket 16-Pole IC Socket	
	R7 R8	57.11.3102 57.11.3471	1 kOhm 470 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC7 XIC8 XIC9	53.03.0168 53.03.0168 53.03.0168		16-Pole IC Socket 16-Pole IC Socket 16-Pole IC Socket	
υ	R9 DER (00	57.11.3332 ) 88/08/11 DS	3.3 kOhm AUDIO CONTI		PAGE 3	STU			AUDIO CONTE		.681.00 PAG
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	м.
	R10 R11 R12	57.11.3472 57.11.3561 57.11.3681	4.7 kOhm 560 Ohm 680 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF			XIC10 XIC11 XIC12	53.03.0166 53.03.0168 53.03.0168		8-Pole IC Socket 16-Pole IC Socket 16-Pole IC Socket 8-Pole IC Socket	
	R13 R14 R15	57.11.3332 57.11.3472 57.11.3332	3.3 kOhm 4.7 kOhm 3.3 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF			XIC13 XIC14 XIC15	53.03.0166 53.03.0167 53.03.0168		14-Pole IC Socket 16-Pole IC Socket	
	R16 R17 R18	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF			XIC16 XIC17 XIC18	53.03.0168 53.03.0166 53.03.0167		16-Pole IC Socket 8-Pole IC Socket 14-Pole IC Socket	
	R20 R21	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC19	53.03.0166		8-Pole IC Socket	
	R22 R23 R24	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R25 R26	57.11.3332 57.11.3332 57.11.3242	3.3 kOhm 3.3 kOhm 2.4 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R27 R28 R29	57.11.3221 57.11.3511	220 Ohm 510 Ohm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R30 R31 R32	57.11.3562 57.11.3103 57.11.3103	10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF							
	R33 R34 R35	57.11.3103 57.11.3332 57.11.3242	10 kOhm 3.3 kOhm 2.4 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R36 R37 R38	57.11.3221 57.11.3511 57.11.3562	220 Ohm 510 Ohm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R39 R40 R41	58.01.8202 58.01.8202 58.01.8202	2 kOhm 2 kOhm 2 kOhm	Potneter PMG Potneter PMG Potneter PMG		PP= P PETF=	olypropylen, Polyester,	SI= Silicon . EL= Electrolyt:	MF= Metal	Film	
	R42 R43 R44	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			ACTURER: MO	T= MOTOROLA, I NATIONAL SEMI	RA= RAYTHEON	, ST= STUDER	
		57.11.3332	3.3 kOhm	1%, 0.25W, MF							

### TC PROCESSOR BOARD 1.727.710.20

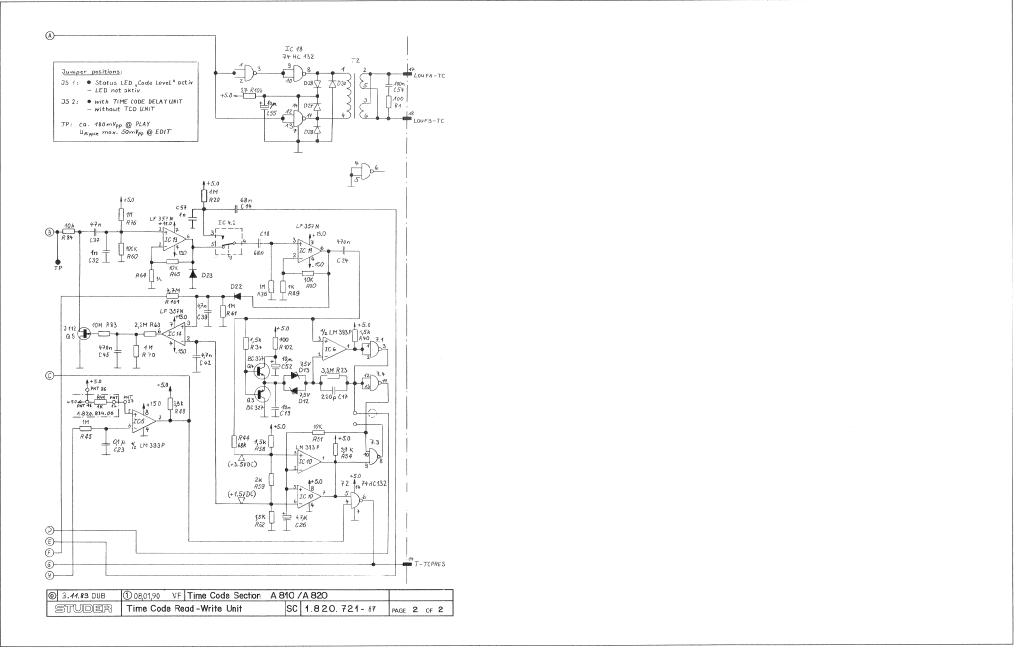


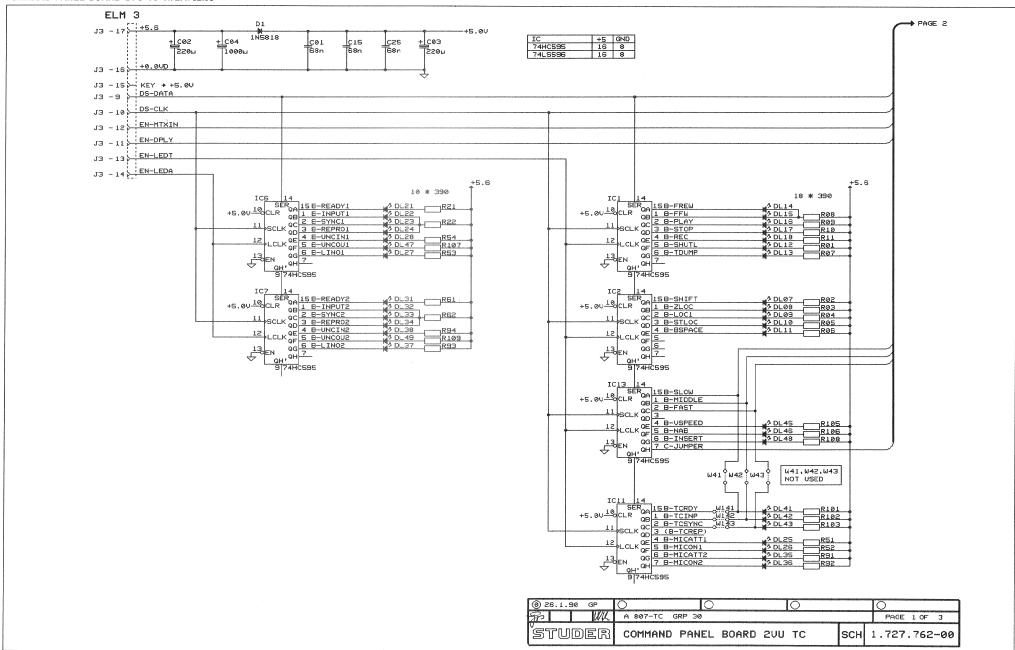
### TC PROCESSOR BOARD 1.727.710.20

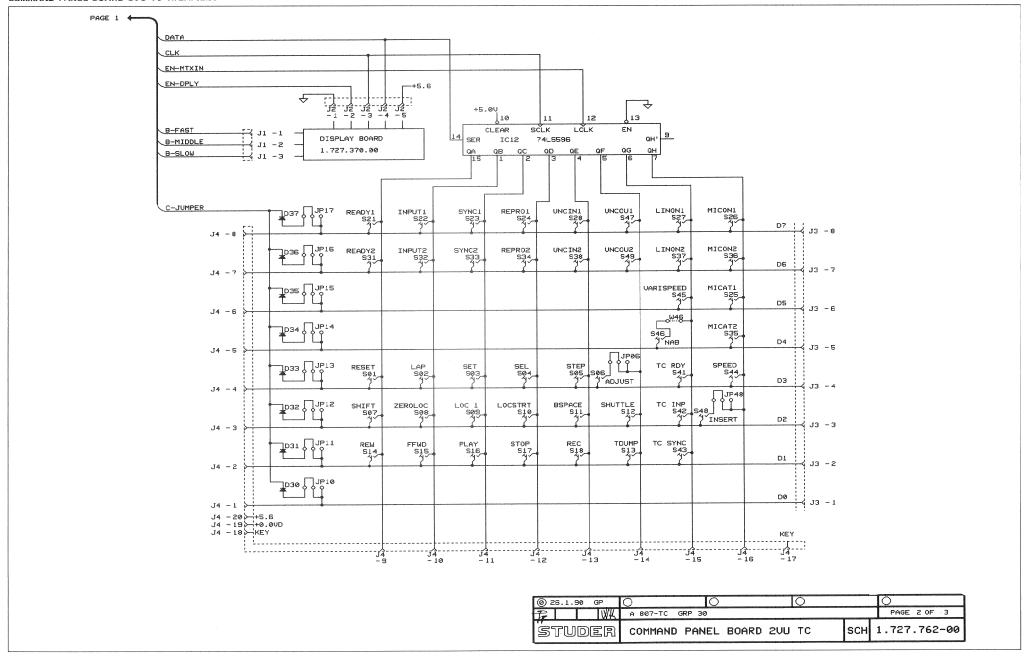


#### TIME CODE READ-WRITE UNIT 1.820.721.87 £ +5.0 R30. + 10,1 C25 ERAHH-FC TA-CLA IC5 TA-ACTIC R38 10k R47 74 65 113 لہ ہی + C21 ERANL-TC 4.7k Ř28 SN 75462 1,14 R53 D18 6,8 V R6 330 #50p ¥ D20 WP145 5,5..65p Q6 ]1k R29 £ 5.6 1/2 RC4559 BC550K Q5 1/2 NE 5532 D19 + 29 4.74 384 R22 3,3 n 036 140M RECHH-TG VN OSBS M R52 AN 5818 D21 1 k R57 1/2 RC4559 +15.0 2,21 AM D 150 C46 TC16 0 13 L + 0.0 8AT85 ² c2 024 -15.0 IC 4.1 LF 357 N LF 35 7 N T\_TCINDL N +15.0 C53 +15.0 IC 4.3 LF 357 N T\_TCOUDL JS2 -150 \* 47p 0.56 IC 17 REPHH-TC R37 2,7k R 105 C23 1.150 680 R74 220 10 K 14,7k R72 V+5.0 4.820.834.00 R85 R94 PHT 43 100 D25 BAT 85 10 👗 R75 REPHL-TC 47 n D26 BAT 85 C30 ± 1 11 R78 15 LIN FA-TC R86 R15 \$ 5K J112 IC4 LINFB-TC 0 R 69 PNT B Q7 VN 0808 10 M PNT 4 P.99 + 15.0 +15.0 A 201 R2 17,5" +15.0 R 14 120 k PNT 10 PNT 3 BC 237B CD 4:153 40M [ Alou L 150 470n. 1k R67 D15 4 NE 5582 R 43 21k 10 K R31 CA-SAFE CA-DATAO 31 CA-DATA1 32 CA-DATA2 33 CA-DATA3 14 CA-DATA3 14 CA-DATA4 35 68n <u></u> 1,5 t R43 3,38 In C33 C38 680p 60H C43 10 K R27 100k 150p | C41 R32 D16 IC1 CA - WRTTC CA-RSITC CA-RSITC CA-BPOTC CA-DATAS 36 100 R 83 CA-DATAG 17 CA- DATA7 38 MM 74C374 100K R33 0 0 0 1 CA-WRFTC CA-RSITE 1000 CA-CHS-TC39 PNT 9 0 1 0 CA - RS2 TC IC3 CA-ADR-T 29 3 CA - BPDTC x 0 0 0 CA-ADR-U-\*has been modified 1 N 4448 - D2, D4, D5, D8, D10, BAT 85 - D7, D3, D23 - D30 1 N 5818 - D19, D20 1 N 4001 - D1, D3 014÷ D17, D21, D22 CD 4556 8 (6) 3.11.89 DUB 1 08,01,90 VF Time Code Section A810 / A820 Time Code Read - Write Unit SC 1.820.721-87 STUDER PAGE 1 OF 2

### TIME CODE READ-WRITE UNIT 1.820.721.87







#### COMMAND PANEL BOARD 2VU TC 1.727.762.00

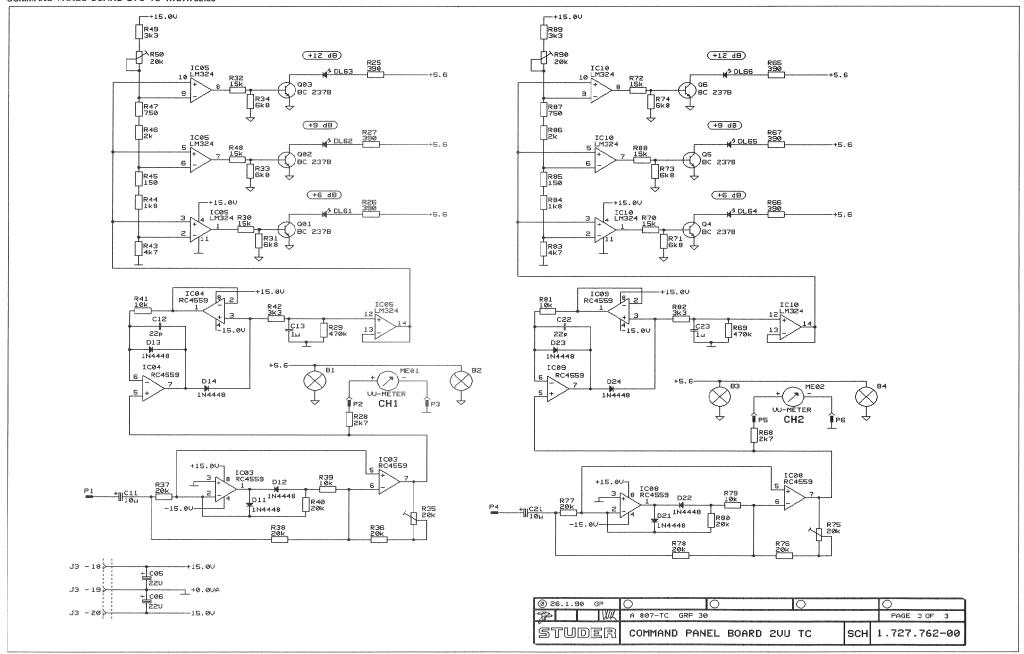


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### 1. GENERAL INFORMATION

#### 1.1 QUICK REFERENCE DESCRIPTION

With its compact and rugged design, its system flexibility, and the high operating convenience afforded by its microprocessor, the STUDER A807 tape recorder satisfies all requirements of a universal studio machine, be it radio or television studios, recording studios, theater, film, auditoriums, or scientific institutes.

#### Its salient features are:

- Highly stable die-cast aluminum alloy chassis for the tape transport, the headblock, and other assemblies.
- Hall-commutated brushless DC capstan motor with capacitative tacho sensor for highly accurate tape speed and outstanding acceleration and deceleration rates.
- Fast tape deck with high tape spooling speeds and gentle handling of the tapes by electronically controlled tape tension, 2 controlled AC spooling motors with photoelectric tacho sensors and noncontacting tape tension sensor.
- Precision electronic tape counter with real-time indication. Photoelectric scanning of the guide roller rotation.
- Easy editing: motor-assisted with variable spooling speed (SHUTTLE mode) or manually by turning the right-hand reel (one-handed editing). For cueing in spooling mode, the high end of the frequency response is lowered.
- Monitor speaker below the tape deck cover or in the penthouse.
- Manually operable shield above the reproduce head; can remain closed in spooling mode.

Due to the enormous system flexibility, a suitable A807 version is available for any type of application:

- The basic version is available as a mono, 2channel or stereo machine with or without external instrument panel.
- Can be operated in horizontal, inclined, or vertical position.
- Three of four available tape speeds can be selected: 3.75 / 7.5 / 15 / 30 ips. Depending on the configuration either the slowest or the fastest speed is not available.
- The inputs and outputs are balanced and floating, with input/output transformers.
- Either with selector switch for two tape types with different calibration data, or with selector switch for NAB/CCIR equalization.
- Zero locator and transfer locator for up to 3 addresses as standard features.
- Dolby HX PRO noise reduction system as standard feature.
- Equipped with varispeed (variable tape speed).
- Keys for input and output selection on models equipped with VU meters:

Input selection: MIC ON (microphone input; this input does not exist on units equipped with external instrument panel); LINE ON (line input). The microphone inputs are always equipped with a 48 V phantom power (changeover to 24 or 12 V possible. Output selection: INPUT, REPRO, and SYNC (reproduction via record head).

- VU-meter panel with input and output selection keys, level potentiometer for recording.
- Adjustable for line voltages of 100 to 140 V / 200 to 240 VAC, ±10%, 50...60 Hz.
- Can be remote controlled from a terminal or personal computer via an RS232 interface.
- Connection facilities for fader start circuit, parallel and serial remote control.

High operating convenience afforded by microprocessor control:

- The last operating state is saved when the machine is switched off: tape counter, locator addresses, tape speed, setting of the input and output selectors. The STOP mode is automatically activated when the machine is powered on again.
- Drop in by pressing only the REC key in play mode (internally programmable)
- Drop out by pressing PLAY during a recording.
- Reduced spooling speed (LIBRARY WIND): A lower spooling speed can be selected for producing pancakes that are to be saved in the library.
- REVERSE PLAY
- TAPE DUMP (waste basket mode with disabled take-up motor).
- LAP TIME (second time level for measuring individual tape segments without influencing the main tape counter).
- Adjustment of the audio parameters and setting of "soft jumpers" via the keyboard.
- LOC START positions the magnetic tape automatically at the address at which the last play or record command (for standstill) was entered.

# The following options are available:

- Mono/stereo switch with or without test generator (60, 125 Hz, 1, 10, 16 kHz).
   Tape scissors and tape marker as well as a
- Tape scissors and tape marker as well as a headblock cover plate with integrated scissors/splicing block.
- Additional splicing block for units without VUmeter.
- Synchronizer interface.

#### STANDARD VERSIONS

#### 1.2.1 Full-track versions A807-1

#### A807-1

#### Order No. 60.116.07011

- Machine for 1/4" tape
- Mono with full-track erase head.
- Without channel control.
- Monitor speaker built into tape deck cover. Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-1 VU

#### Order No. 60.116.07012

- Machine for 1/4" tape.
- Mono with full-track erase head.
- With channel control.
- Microphone input with phantom power
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer integrated in the operator panel
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

### A807-1 VUK \*

# Order No. 60.116.07013

- Machine for 1/4" tape.
- Mono with full-track erase head.
- With channel control.
- Monitor speaker and VU-meter with an input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-1 VUK HS \*

# Order No. 60.116.07015

- Machine for 1/4" tape.
- Mono with full-track erase head.
- With channel control.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as . output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (7.5 / 15 / 30 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-1 VU PB0

#### Order No. 60.116.07017

- Machine for 1/4" tape.
- Mono, reproduce-only (recording electronics not retrofittable).
- Without channel control.
- Monitor speaker built into tape deck cover.
- VU-meter and output level potentiometer inteorated in operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# 1.2.2 Stereo versions A807-0.75

#### A807-0.75

#### Order No. 60.116.07021

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, fulltrack erase head.
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

### A807-0.75 VU

# Order No. 60.116.07022

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, overlapping erasure.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer channel control as well as output level potentiometer built into the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-0.75 VUK \*

#### Order No. 60.116.07024

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-0.75 VUK HS \*

#### Order No. 60.116.07025

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (7.5 / 15 / 30 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-0.75 PB0

#### Order No. 60.116.07026

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, reproduceonly (recording electronics not retrofittable).
- Without channel control.
- Monitor speaker built into tape deck cover. Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-0.75 VU PBO

#### Order No. 60.116.07027

- Machine for 1/4" tape.
- Stereo with 0.75 mm track separation, reproduceonly (recording electronics not retrofittable).
- Without channel control.
- Monitor speaker built into tape deck cover.
- VU-meter with output level potentiometer integrated in operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-0.75/4 VU

#### Order No. 60-116-07054

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Second reproduce head for 1/4 track format.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover. VU-meter with input level potentiometer channel control as well as output level potentiometer built into operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version

#### A807-0.75/4 VUK \*

#### Order No. 60.116.07052

- Machine for 1/4" tape.
- 2-Track/stereo with 0.75 mm track separation, overlapping erasure.
- Second reproduce head for 1/4 track format.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into instrument panel.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

#### 1.2.3 Two-track versions

A807-2

#### A807-2 F

# Order No. 60.116.07030

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, fulltrack erase head.
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/2

### Order No. 60-116-07031

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- With channel control, without VU-meter and input/output level potentiometers.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/2 VU

# Order No. 60.116.07032

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometers and channel control as well as output level potentiometer integrated in the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-2/2 VUK \*

#### Order No. 60.116.07034

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

# A807-2/2 VUK HS \*

#### Order No. 60.116.07065

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (7.5 / 15 ips / 30 ips).
- Varispeed (variable tape speed).
- Console version.

#### A807-2

#### Order No. 60-116-07033

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, overlapping erasure.
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

### A807-2 PB0

# Order No. 60.116.07036

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, reproduce-only (recording electronics not retrofittable)
- Without channel control.
- Monitor speaker built into tape deck cover.
- Maximum reel diameter 282 mm (11.1"). Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

#### A807-2 VU PBO

#### Order No. 60.116.07037

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, reproduceonly (recording electronics not retrofittable)
- Without channel control.
- Monitor speaker built into tape deck cover.
- VU-meter with output level potentiometer built into tape deck cover.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/4 VU

#### Order No. 60.116.07053

- Machine for 1/4" tape.
- Stereo with 2 mm track separation, overlapping erasure.
- Second reproduce head for 1/4-track format.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-Meter with input level potentiometers and channel control as well as output level potentiometer integrated in the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-2/4 VUK \*

# Order No. 60.116.07051

- Machine for 1/4" tape.
- 2-Track/stereo with 2 mm track separation, overlapping erasure.
- Second reproduce head for 1/4-track format.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

# 1.2.4 1/4-Track, 2-channel versions

A807-4/2

#### A807-4/2 VU

Order No. 60.116.07038

- Machine for 1/4" tape.
- 1/4-Track format, 2-track/stereo, with 1/4-track erasure.
- Microphone input with phantom power.
- Monitor speaker built into tape deck cover.
- VU-meter with input level potentiometer and channel control as well as output level potentiometer integrated in the operator panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Chassis version.

# A807-4/2 VUK

Order No. 60.116.07039

- Machine for 1/4" tape.
- 1/4-Track format, 2-track/stereo, with 1/4-track erasure.
- Monitor speaker and VU-meter with input level potentiometer and channel control as well as output level potentiometer built into the instrument panel.
- Maximum reel diameter 282 mm (11.1").
- Three tape speeds (3.75 / 7.5 / 15 ips).
- Varispeed (variable tape speed).
- Console version.

# \* Notes

On request, special instrument panels for 19" rack mounting (in place of the wooden side panels) are available for all VUK versions. The rack mounting brackets 1.727.071.00 must be ordered in this case.

#### 1.3 OPTIONS

#### Tape scissors

Order No. 20.807.894.00

Kit for all versions except:

A807-2/4; A807-2/4 VUK; A807-0.75/4 VU; A807-0.75/4 VUK.

#### Tape marker

Order No. 20.807.896.00

Kit for all versions.

#### Tape scissors and tape marker

Order No. 20.807.895.00

Kit for all versions except: A807-2/4; A807-2/4 VUK; A807-0.75/4 VU; A807-0.75/4 VUK.

#### cutting/splicing block

Order No. 20.807.173.00

For installation on the operator panel.

 For versions with VU-meters installed in the instrument panel or for versions without VU-meter.

#### Cutting/splicing block

Order No. 20.807.172.00

 Headblock cover designed as a cutting/splicing block. For all versions.

# Mono/stereo switch

Order No. 20.807.176.00

For all record/reproduce versions.

# Mono/stereo switch with test generator

Order No. 20.807.174.00

 For all versions. With built-in booster amplifier for 10 and 20 dB and test generator (60, 125 Hz; 1, 10, 6 kHz).

# Mono/stereo switch for (PBO) reproduce-only versions

Order No. 20.807.168.00

For all (PBO) reproduce only versions.

# 12 V Phantom power conversion kit (instead of 48V)

Order No. 20.807.175.00

For all versions with balanced microphone input.

#### Synchronizer control port

Order No. 20.807.177.00

Kit for all versions.

#### Penthouse with stereo monitor

Order No. 20.807.171.00

For all versions without instrument panel.

Contains: Stereo monitor speaker, volume control and source selector for input, reproduce, and auxiliary input signal. Including wiring and connection components. Only installable on consoles with penthouse (20.020.205.05/.15).

#### Reel shelf

Order No. 21.811.560.00

 Serves as a storage area; in place of the penthouse. Only installable on consoles suitable for penthouse (20.020.205.05/.15).

# 1.4 ACCESSORIES AND SERVICE AIDS

### 1.4.1 Standard accessories

#### Order No. 20.020.302.32

1 Power cord 2.5 m, EURO connector10.223.001.01

1 Set of audio connectors, XLR (per channel)

			20.020.302.02
1	Allen	screwdriver 2.0 mm	26.06.1020
1	Allen	screwdriver 2.5 mm	10.258.003.09
1	Allen	screwdriver 3.0 mm	10.258.003.10
1	Allen	screwdriver 4.0 mm	26.06.1040
5	Fuses	5x20 mm, 1.0 A SLOW	51.01.0117
5	Fuses	5x20 mm, 1.6 A SLOW	51.01.0119
5	Fuses	5x20 mm, 2 A SLOW	51.01.0120
5	Fuses	5x20 mm, 3.15 A SLOW	51.01.0122
		5x20 mm, 4 A SLOW	51.01.0123
		ter bulbs 6 V/30 mA	51.02.0144
1	Label	set	1.727.100.58

#### 1.4.2 Consoles

A807 consoles are supplied assembled with wooden side panels, tilt mechanism, and lockable casters. Working height: 840 mm

#### Consoles with penthouse

With traverse

Order No. 20.020.205.05

With 19" rack base
 Order No. 20.020.205.15
 for three 19" modules with a height of 40.58 mm
 each.

# Consoles without penthouse

- With traverse Order No. 20.020.205.25
- With 19" rack base Order No. 20.020.205.35 for three 19" modules with a height of 40.58 mm each.

# 19" Rack base

Retrofit kit Order No. 1.058.057.00
 For three 19" modules with a height of 40.58 mm
 each.

# Blanking panels for rack base

Aluminum, transparent anodization:

	1 Unit high	Order No. 1.918.001.00
8	2 Units high	Order No. 1.918.002.00
	3 Units high	Order No. 1.918.003.00

#### 1 Height unit = 40.58 mm

# Aluminum, grey lacquering:

100	1	Unit high	Order	No.	1.918.011.00
	2	Units high	Order	No.	1.918.012.00
	3	Units high	Order	No.	1.918.013.00

### 1 Height unit = 40.58 mm

# Screws for rack mounting:

1	M6	x 12 x 16 washers	Order	No.	21.99.0164 21.99.0167 23.99.0121
100	M6	washers	Order	No.	23.99.012

#### 1.4.3 Remote controls

 Parallel tape deck control in desktop housing, with 15 m cable.

Order No. 20.820.366.00

<u>Varispeed kit</u> for installation in desktop housing of the parallel tape deck remote control, with connection cable

Order No. 21.328.253.00

25-Pin connector, type D, for installation in desktop housing of the parallel remote control. (Through-connection of the remote control signals for a second remote control terminal).

Order No. 21.328.254.00

 Parallel tape deck control in STUDER standard module, 1 unit wide, with 15 m cable.

Order No. 20.820.367.00

 Parallel varispeed remote control in STUDER standard module, 1 unit wide, without connection cable.

Order No. 21.328.290.00

Connection cable 0.3 m for connecting the parallel varispeed remote control module to the parallel tape deck remote control (20.820.367.00)

Order No. 1.023.102.03

Connection cable 15 m for direct connection of the parallel varispeed remote control module to the A807 tape recorder.

Order No. 1.328.292.00

 Parallel varispeed remote control in STUDER standard module, 1 unit wide, with digital input of the speed deviation and real-time indication in percent or semitones. Without connection cable.

Order No. 10.403.050.00

Connection cable 0.3 m for connecting the parallel varispeed remote control module (10.403.050.00) to the parallel tape deck remote control (20.820.367.00)

Order No. 1.023.730.00

Connection cable 15 m for direct connection of the parallel varispeed remote control module (10.403.050.00) to the A807 tape recorder. Order No. 1.023.731.00

Desktop housing for Studer standard-module remote controls, for installation of up to 6 STUDER remote controls.

Order No. 1.328.095.00

# Blanking panels for desktop housing

# Aluminum, transparent anodization:

	1 Module wide	Order No. 1.	038.341.00
88	2 Modules wide	Order No. 1.	038.342.00
	3 Modules wide	Order No. 1.	038.343.00

# Aluminum, grey lacquering:

	1 Module wide	Order No.	1.328.185.00
	2 Modules wide	Order No.	1.328.186.00
	3 Modules wide	Order No.	1.328.187.00
50	5 Modules wide	Order No.	1.328.189.00

#### 1.4.4 Remote counters

 Chassis/desktop model incl. 15 m connection cable (for connection to the RS232 interface of the tape recorder).

Order No. 20.020.100.30

Masks, standard module 5 units (190 x 202.9 mm):

for one remote counter Order No. 1.328.275.31

■ for two remote countersOrder No. 1.328.275.32

for three remote counters

Order No.1.328.275.33

#### Connectors for remote Control ports

No connectors are needed for STUDER remote controls.

Serial
 Parallel
 Synchronizer
 Order No. 20.020.303.16
 Order No. 20.020.303.15

### 1.4.5 Adapters and tape reels

NAB reel adapter with control grip

Order No. 1.013.332.00

NAB reel adapter, standard

Order No. 89.01.0354

NAB metal reel, 1/4", without tape

Order No. 10.213.001.01

DIN open-reel hub

Order No. 10.200.003.01

DIN open-reel pancake platter

Order No. 1.013.046.00

# 1.4.6 Aids

# STUDER tape splicing kit

Comprising a cutting and editing block, one antimagnetic cutting blade, splicing tabs, and a grease pen for marking the tape.

Order No. 10.030.452.40

# STUDER cleaning kit in carrying case

Contains 1 bottle of head cleaner, 1 bottle of aluminite cleaner, lint-free nonwoven fleece squares, and a piece of buckskin.

Order No. 10.496.010.00

Head cleaner:

Replacement bottle
 1 litre
 Order No. 10.496.021.00
 Order No. 10.496.022.00

Aluminite cleaner:

Replacement bottle Order No. 10.496.025.00

1 litre Order No. 10.496.026.00

# Service aids

Tool case (basic kit) with soldering iron and demagnetizing choke for 110 V.

Order No. 20.020.001.20

Tool case (basic kit) with soldering iron and demagnetizing choke for 220 V.

Order No. 20.020.001.21

Supplementary tool kit for A807 tape recorder, including extension cord for the capstan motor (1.727.216.00) and the spooling motors (1.727.217.00)

Order No. 20.020.001.38

#### Additional manuals

Operating and service instructions:

 English
 Order No. 10.27.0452

 German
 Order No. 10.27.1280

 French
 Order No. 10.27.1290

#### 1.4.7 Accessories

#### Wooden side panels, transport cover

Wooden side panels with recessed carrying grips. Order No. 1.727.070.00

Transport cover, also offers space for two tape reels and the connection cables. (Wooden side panels 1.727.070.00 are required).

Order No. 1.727.074.00

#### Carrying case

Made of aluminum, extremely sturdy, requires rack mounting kit (1.727.071.00). The tape recorder can be operated directly when the lid is opened.

Order No. 10.386.001.01

#### Rack mounting kit

Contains two mounting brackets and mounting accessories for installing an A807 into a 19" rack. This kit is not required for STUDER consoles.

Order No. 1.727.071.00

# Handrest and wooden side panels

Wooden side panels with handrest made of leather, for operating the tape recorder on a desk top.

Order No. 1.727.072.00

#### TECHNICAL DATA

# Spooling motors:

Two direct driving external-rotor AC asynchronous motors with active 3-phase control, controlled frequency correction, and switched motor output stages.

#### Capstan motor:

Brushless DC motor with Hall element commutation

#### Tape deck control:

Via microprocessor, for all functions and function transitions.

#### Tape counter:

5-Position LED indication in hours, minutes, and seconds at all tape speeds, from zero in reverse direction with negative sign, decrementing.

-9 h 59 min 59 s ... 29 h 59 min 59 s

#### Starting time:

At 15 ips tape speed, 1000 m tape with DIN hub or  $762~\mathrm{m}$  (2500 ft) tape with NAB reel (for reaching 200% of the specified wow-and-flutter ra-

approx. 0.8 s

# Winding time:

for 760 m tape <90 s for 1000 m tape <120 s

#### Braking time:

from winding speed approx. 3 s

# Winding at reduced speed:

LIBRARY WIND mode approx. 5 m/s

# Tape reels:

11,1" / 282 mm Max. reel diameter 1.8" / 45 mm 2.4" / 60 mm Min. hub diameter, left Min. hub diameter, right NAB/DIN, Ciné, 3-prong Reel adapter The maximum pancake capacity with professional magnetic tape (thickness 50 μm) is

3280 ft / 1000 m

1/4" / 6.3 mm Tape width:

#### Tape speeds:

Normal versions:

Switch-selectable: cm/s 38.1 19.05 9.525

15 7.5 ips 3.75

HS versions:

cm/s 76.2 38.1 19.05 Switch-selectable:

ips 30 15 7.5

#### Tape speed deviation:

max. ±0.2%

#### Varispeed:

Wow and flutter:

Variable tape speed in semitones (ST)

3.75 ips +7...-1.5 ST 7.5 ips +7...-7 15 ips +7...-7 ST 30 ips +7...-7

Peak value weighted, according to DIN 45507 or IEC publ. 386. Ambient air temperature O...+40°C 3.75 ips ±0.10% Nominal tape speeds.

7.5 ips: 0.07% 15 ips: 0.05%

ST

30 ips: 0.05%

Max. 0.1% Tape slip:

#### Tape tension:

Controlled in all tape transport functions, measured with spring dynamometer, in record and play mode. Factory setting based on horizontal operating position.

Nominal:

0.7 N (70 p) 0.5...1.8 N

Adjustable:

Line inputs:

Via transformer, balanced, floating Input impedance 30 Hz ... 20 kHz

≥10 kΩ

#### Input levels:

NAB:

For operating level (O VU) +4 dBu -30 ... +12 dBu Internally adjustable

CCTR:

For peak level (0 VU + 6 dB) +A dBu -24 ... +18 dBu Internally adjustable

UNCAL: (for versions with VU meters and input/output level potentiometers) Max. increase of the input sensitivity 10 dB Max. admissible input level +24 dBu

Internal adjustment range of the working magnetic flux with the above input levels:

100 ... 1000 nWb/m

#### Microphone inputs:

Via transformer, balanced, floating Input impedance:

>1.2 kΩ

#### Input level:

Without attenuator (max. -26 dBu) -82 dBu With attenuator (max. 2.6 dBu/1 kHz -54 dBu O dBu/40 Hz)

#### Noise factor:

 $Rq = 200 \Omega \qquad (5 dB)$ 

Phantom power: (convertible to +12 V) +48 V

#### Output meters:

VU versions: VU-meter LED peak program meter: O VU +6 / +9 / +12 dBu Indication O dB at: O VU

# Line outputs:

Via transformer, balanced, floating Source impedance:

<50 Ω

#### Output level:

m NAR

For operating level (O VU, into 600  $\Omega$  load + 4 dBu Internally adjustable -17 ... +12 dBu

CCIR:

For peak level (+ 6 dB) into 600 Ω load

load + 6 dBu Internally adjustable —11 ... + 18 dB

UNCAL: (for versions with VU meters and input/output level potentiometers).
 Max. increase of the reproduce gain
 Max. output level
 into 600 Ω load +24 dBu
 into 200 Ω load +22 dBu

Internal adjustment range of the reproduce gain for working magnetic flux of  $100\ \dots\ 1000\ \text{nWb/m}$ 

# Headphones output:

Short-circuit-proof, RL > 600  $\Omega$  / Ri = 220  $\Omega$   $_{\rm max.}$  5.0 V

Monitor speaker: max. 0.7 W

# Equalizations:

Switch-selectable CCIR / NAB

#### Equalization time constants:

	9.5 cm/s 3.75 ips	19 cm/s 7.5 ips	38 cm/s 15 ips	76 cm/s 30 ips
CCIR	90/3180 μs	70/ Φ μs	35/ ∞ μs	17.5/ ω με
NAB	90/3180 µs	50/3180 μs	50/3180 μs	17.5/ Φ μs

#### Frequency response, record/reproduce mode:

	9.5 cm/s 3.75 ips	19 cm/s 7.5 ips	38 cm/s 15 ips	76 cm/s 30 ips
±2dB	30Hz12kHz	30Hz16kHz	30Hz 20kHz	
±1dB	30Hz 8kHz	30Hz12kHz	50Hz18kHz	

### Frequency response, clock track reproduction

	9.5 cm/s 3.75 ips	19 cm/s 7.5 ips	38 cm/s 15 ips	76 cm/s 30 ips
±2dB	40Hz6kHz	40Hz10kHz	<b>40Hz</b> 12kHz	40Hz12kHz

# Signal-to-noise ratio, record/reproduce mode:

#### CCIR:

Equalization according to CCIR, measured with tape type AGFA PER528, BASF LGR50 or equivalent tape.

# Full track, 6.3 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	250	320	320	320
unweighted according to CCIR468-II	57 dB	61 dB	.61 dB	
weighted according to CCIR468-II	49 dB	51 dB	52 dB	
weighted according to ASA-A (IEC179)	62 dB	64 dB	65 dB	

# Stereo 2.75 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	400	510	510	510
unweighted according to CCIR468-II	57 dB	61 dB	62 dB	
weighted according to CCIR468-II	49 dB	51 dB	53 dB	
weighted according to ASA-A (IEC179)	62 dB	65 dB	66 dB	

#### = 2-Track, 2 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	400	510	510	510
unweighted according to CCIR468-II	56 dB ,	60 dB	61 dB	
weighted according to CCIR468-II	48 dB	50 dB	52 dB	
weighted according to ASA-A (IEC179)	61 dB	64 dB	65 dB	

#### NAB:

Equalization according to NAB, measured with magnetic tape SCOTCH 3M 226 or equivalent type.

# Full track, 6.3 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	510	1040	1040	1040
Linear, RMS, 30 Hz20 kHz	62 dB	72 dB	71 dB	
RMS value ASA-A weighted according to DIN 45633; IEC 179	66 dB	76 dB	74 dB	

# Stereo, 2.75 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	510	1040	1040	1040
Linear, RMS, 30 Hz20 kHz	57 dB	69 dB	67 dB	
RMS value, ASA-A weighted, according to DIN 45633; IEC 179	62 dB	72 dB	71 dB	

# 2-Track, 2 mm track width:

	9.5 cm/s 3.75 ips			76 cm/s 30 ips
nWb/m	510	1040	1040	1040
Linear, RMS, 30 Hz20 kHz	56 dB	68 dB	66 dB	
RMS value, ASA-A weighted, according to DIN 45633; IEC 179	61 dB	72 dB	70 dB	

#### SYNC:

All versions:

RMS value, ASA-A (IEC179 / DIN 45633): Same values as measured with tape Record - sync - play mode

Harmonic distortion K3: (RL =  $600 \Omega$ )

#### CCIR:

Peak level, record/reproduce, measured with tape type PER528.

3.75 ips / 315 Hz (400 nWb/m)	≤1.5	%
7.5 ips / 1 kHz (510 nWb/m)	≤1.5	7.
15 ips / 1 kHz (510 nWb/m)	≤1.0	%
30 ips / 1 kHz (510 nWb/m)	≤1.0	%

#### NAB:

Peak level, record/reproduce, measured with tape type 3M226.

3.75 ips / 315 Hz (400 nWb/m)	≤1.0	7.
7.5 ips / 1 kHz (5100 nWb/m)	≤1.0	%
15 ips / 1 kHz (510 nWb/m)	≤1.0	7.
30 ips / 1 kHz (510 nWb/m)	≤1.0	%

#### Channel separation:

According to DIN 45521, at 15 ips/1 kHz 255 dB

### Erase depth:

With 2-track erase head, at 15 ips/1 kHz  $\geq$ 75 dB With full track erase head,

at 15 ips / 1 kHz 278 dB

# Erase and bias frequency:

At all tape speeds 153.60 kHz

# Power requirements:

Switch-selectable: 100/120/140/200/220/240 V ±10% 50...60 Hz

# Power fuse:

100...140 V 3.15 A / 250 V slow 200...240 V 1.60 A / 250 V slow

# Power consumption:

Idle	approx.	70	VΑ
Recording (2 CH)	approx.	150	VA
Fast forward/rewind	approx.	180	VA
Maximum connected load		300	VA

### Admissible power failure:

For retaining the operational state max. 100 ms

#### Parallel interface:

For controlling the tape transport functions, the variable tape speed (varispeed), and the fader start input.

# Serial interface:

(RS232) for remote control of all functions.

# Ambient temperature range:

Operation:

(32...104°F) 0...40°C

#### Relative humidity:

Noncondensing

20...90%

Oerating position:

From horizontal to vertical

# Safety standards:

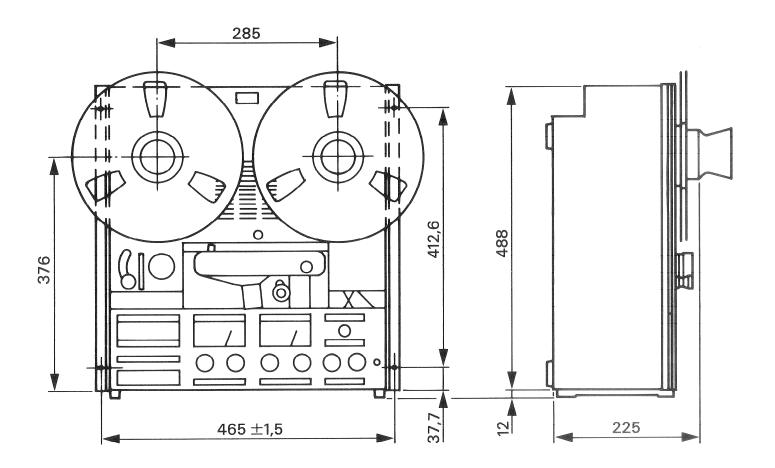
According to IEC recommendation, publication 65, protection category (power filter, power switch, power fuse, power transformer, and voltage selector according to categories I and II).

# Weight:

Chassis version

approx. 30 kg

# 1.5.1 Dimensions (in mm)



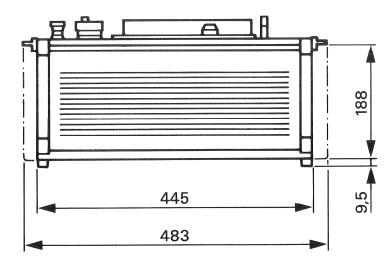
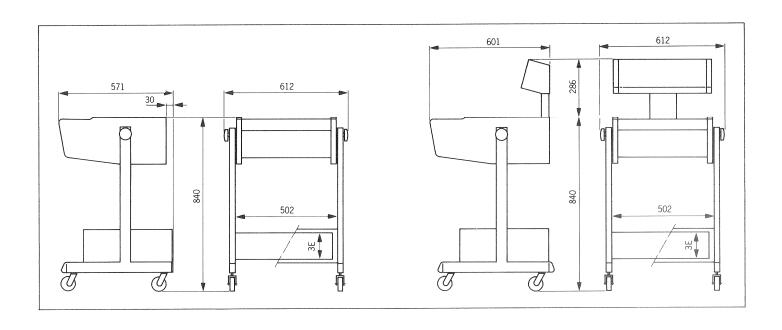


Fig. 1.5.1



# 1.5.2 Packing

# A807 tape recorders with monitor overbridge and "ECO" console

Box for tape recorder: 64x62x46
Box for "ECO" console: 87x67x17
Box for monitor overbridge: 55x25x21

# A807-VUK with "ECO" console

Box for tape recorder: 64x62x46
Box for "ECO" console: 87x67x17
Box for VU-meter overbridge: 55x25x21

# Gross weight:

Depending on configuration: 32.5 kg - 63.5 kg.

# 1.6 INSTRUCTIONS FOR SERVICE PERSONNEL

# 1.6.1 Abbreviations

A AN B B B B C D D L C R D D D D D E E F L H C E C D S K L S M E C D M M M M P P B C D D D D D D D D D D D D D D D D D D	Assembly Antenna Bulb Battery Optocoupler (bulb> LDR) Capacitor Diode, DIAC LED Optocoupler (LED> phototransistor) Optocoupler (LED> LDR) LED-Array, 7-segment display Photodiode Rectifier Electronic component Headphones Fuse Filter Head (audio, erase) Hybrid circuit (thick/thin film) Hall element Integrated circuit Socket (female) Jumper Relay, contactor Inductor Loudspeaker Motor Meter Microphone Mechanical part Connector (male)
	Hybrid circuit (thick/thin film)
	Hall element
-	
	•
	• •
1	·
ME	Meter
	·
PU PU	Connector (male) pickup
a	Transistor, FET, Thyristor, TRIAC
QP	Phototransistor
QPZ	Phototransistor array
R	Resistor
RP	Light-sensitive resistor, LDR
RT RZ	Temperature-dependent resistor Resistor network
S	Switch
T	Transformer
TL	Delay line
TP	Test point, test socket
W	Wire, stranded wire
XB	Base, holder Lamp base
XF	Lamp base   Fuse holder
XIC	IC socket
Y	Crystal, Piezo-Element
Z	Network, Array
L	

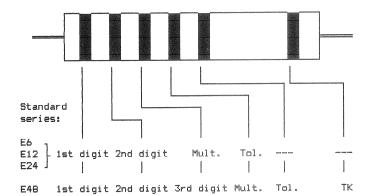
1.6.2 Powers of ten

Designation	Abbreviaton	Value
Tera-	T	10 <sup>12</sup>
Giga-	G	10 <sup>9</sup>
Mega-	M	106
Kilo-	k	10 <sup>3</sup>
Milli-	m	10 <sup>-3</sup>
Mikro-	μ	10 <sup>-6</sup>
Nano-	n (mμ)	10 <sup>-9</sup>
Pico-	p (μμ)	10 <sup>-12</sup>
Femto-	f	10 <sup>-15</sup>

() = Abbreviation used in the USA

# 1.6.3 Letters and color codes

# Resistors



Color	Digit	Multiplier	Tolerance	TK
Gold	***	0.01	5 %	MAGES .
Silver	4000	0.1	10 %	-
Black	0	1	*****	
Brown	1	10	1 %	100 · 10-6/K
Red	2	100	2 %	50 · 10 - 6/K
Orange	3	1 k	_	15 · 10 - 6 / K
Yellow	4	10 k	_	25 · 10 - 6 / K
Green	5	100 k	0.5 %	
Blue	6	1 M	0.25 %	_
Violet	7	10 M	0.1 %	
Grey	8		_	-
White	9	NAME .		-

No TK designation =  $50 \cdot 10^{-6}$ /K Only 1 black ring =  $0 \Omega$  (jumper)

# <u>Capacitors:</u>

Frequently, the tolerance is specified by a letter after the printed capacitance:

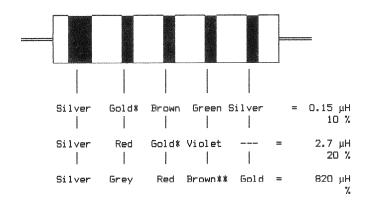
D	=	ø <b>,</b> 5	%
F	entered solution	1	%
G	==	2	7.
J	=	5	7.
ĸ	=	1Ø	7.
М	=	2Ø	7.

#### Mould RF coils:

For identifying mould RF coils, a wide silver ring and four narrow rings of different colors are used. The wide silver ring marks the start of the counting direction. The second, third, and fourth ring specify the inductance in Microhenry (µH). The second and the third ring designate the numeric value and the fourth ring is either a multiplier, or if its color is gold, the decimal point. The fifth ring designates the tolerance in percent (±).

			_
Color	Digit	Multiplier	Tolerance
Gold	3	STATE OF THE PROPERTY OF THE P	5 %
Silver	_		10 %
Black	0	1	_
Brown	1	10	1 %
Red	2	100	2 %
Orange	3	103	_
Yellow	4	104	-
Green	5	105	0.5 %
Blue	6	106	
Violet	7	107	_
Grey	8	108	-
White	9	109	_
any	_	****	20 %
· ·			1

#### Example:



- \* Decimal point
- \*\* Multiplier

### Inductors, transformers on ferrite cores:

Inductors and transformers on ferrite cores are marked with three colored dots (color coding same as in the two left-hand columns of the Section "Resistors"). These dots designate the last three digits of the STUDER standard number. The large dot marks the start. The first digits of the Standard-number (10.022.---)

E.g. Driver transformer, 150 kHz. Standard number: 1.022.211 Color code: red (large dot), brown, brown

Terminal 1 of the winding form is usually identified with a lobe; if not, the winding form is marked with a yellow dot near terminal 1.

# 1.6.4 Electrostatically sensitive components



MOS (metal oxide semiconductor) devices are highly sensitive to electrostatic charges. The following precautions should be followed:

- Electrostatically sensitive components and assemblies ("ESE" are stored and transported in protective packing material. The label shown above is affixed to this protective packing.
- It is important to avoid any contact of the terminals with plastic bags and foils and other statically chargeable material.
- Touch the terminals only when your wrist is connected to ground.
- As a work surface, use a special conductive plastic mat.
- 5. Never install or unplug printed circuit boards when the tape recorder is switched on! The tape recorder should be switched off for at least 5 seconds before any circuit boards are installed or removed!

TABLE	OF CONTENT SECTI	ON	2
2.	START-UP PROCEDURE, OPERATING		1
2.1	UNPACKING AND CHECKING		1
2.2 2.2.1	INSTALLATION AND SETUP Assembling the console		1
2.3 2.3.1 2.3.2 2.3.3 2.3.4 2.3.5	CONNECTORS  Power connection, voltage selector  Line inputs and outputs  Microphone inputs  Remote control socket  Headphones socket		2 3 3 4 5
2.4.7 2.4.8 2.4.9 2.4.10 2.4.11 2.4.12 2.4.13 2.4.14 2.4.15 2.4.16 2.4.18 2.4.19 2.4.20	Indications at power on time Inserting the tape Tape speeds [64/65/66] Play mode [28] Reverse play mode Varispeed control [64/67] Record mode REC [30] SYNC reproduction SYNC [40/51] Spooling mode < > [26/27] Producing pancakes at reduced spooling speeds, LIBRARY WIND Stop mode STOP [29] Locator Z-LOC, LOC1 (-3 [19-22] Programmable functions		6 6 14 14 15 15 16 16 16 17 17 17 17 19 19 20 20 21
2.4.22 2.4.23 2.4.24	External monitor Test generator (option) Editing, cutting the tape "Waste basket mode" TAPE DUMP [25]		22 22 23 23
2.5 2.5.1 2.5.2 2.5.3 2.5.4			25 26 26 27 28
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### START-UP PROCEDURE, OPERATING

#### 2.1 UNPACKING AND CHECKING

The A807 tape recorder is shipped in a special packing that protects the machine from damage in transit. Care should be exercised when unpacking the machine so that its surfaces do not become marred.

Check that the material is complete by comparing the packing content with the shipping list. Save the original packing material because it provides the best protection in case your tape recorder needs to be transported again.

Check all items for possible damage in transit. If you discover any damage, immediately notify the forwarding agent as well as the nearest STUDER dealer.

# 2.2 INSTALLATION AND SETUP

The A807 should be installed in a dust-free and an adequately ventilated environment. The performance data of the tape recorder are guaranteed for an ambient temperature range of 0°C to +40°C with a relative humidity of 20% to 90% (noncondensing). Install the tape recorder in such a way that sufficient space is available all around the machine for unobstructed cooling. Particularly in recessed locations there is a possibility of heat accumulation. When the machine is in operation, the air circulation zone should neither be misused as a storage area nor be obstructed with manuals etc.

The tape recorder must not be installed in the vicinity of strong electromagnetic fields. General sources of interference are: strong load fluctuations on adjacent power circuits, high-power transformers, elevator motors, electrical welding plants, as well as nearby radio and television transmitters.

The rear of the unit should remain readily accessible for service work. When the recorder is installed in a niche, sufficient space should be available for shifting the machine even when the cables are attached.

## 2.2.1 Assembling the console

The console is shipped in disassembled condition. First the side panels of the console are to be fastened to the traverse (or the base rack) by means of the four large, nickel-plated screws (yellowish) with 5.0 mm heaxagon socket heads. The mounting holes are to be covered with the four plastic caps.

Subsequently insert the casters into the holes of the side panels. The two lockable caster wheels should be installed on the longer, front pieces. The height of the caster wheels can be adjusted with the four hexagon-socket (2.5 mm) headless screws.

Remove any rack mounting brackets or side panels that may possibly be attached to the recorder. Also remove the skirting on the underside of the recorder.

Install the leather handrest by means of the four smaller, nickel-plated screws (lock washers are installed only with the upper 2 screws).

Fasten each wooden side panel to the recorder by means of four of the shorter burnished screws (hexagon-socket head 4.0 mm). Then suspend the tape recorder in the console and secure it on each side with two long screws.

After the special pan head screws have been unfastened by means of the hexagon socket screw key (5,0 mm), the tape recorder can be tilted around its suspension axis. If frequent adjustment is necessary, the two pan head screws can be replaced with the screws that are fitted with a knob. Ensure that the disc spring washer and the plain washer are reinstalled and aligned in exactly the same sequence (the pin must engage in the hole of the brass disc).

#### 2.3 CONNECTORS

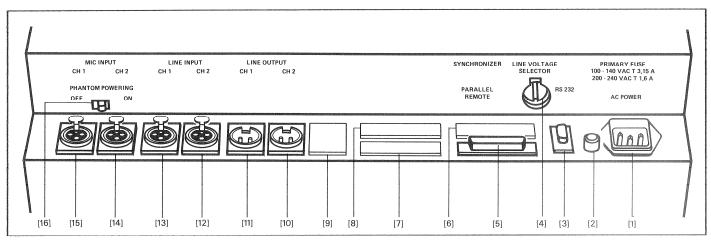


Fig. 2.3.1

[1]	AC POWER	Power inlet with primary fuse	
[2]	Т	Ground socket	
[3]	RS 232	Serial interface	
[4]	Volt. sel.	Line voltage selector	
[5]	PREMOTE	Connector for parallel remote control	
[6]	SYNCHRON.	Connector for optional synchro- nizer	
[7]	VU PANEL CONTROL	Connector for instrument panel (only VUK versions)	
£83	VU PANEL AUDIO	Connector for instrument panel (only VUK versions)	
[8]	MONITOR PANEL	Connector for external monitor for units equipped with monitor panel	
[9]	AUX INPUT	For units with stereo monitor penthouse an additional auxiliary input (stereo) is available for listening via the monitor speaker.	
[10]	LINE OUT	Output channel 2	
[11]	LINE OUT	Output channel 1	
[12]	LINE IN	Input channel 2	
[13]	LINE IN	Input channel 1	
[14]	MIC IN	Microphone input channel 2	
[15]	MIC IN	Microphone input channel 1	
[16]	PHAN.POW.	Switches the phantom power on and off.	

2.3.1 Power connection, voltage selector

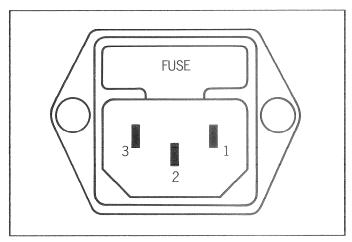


Fig. 2.3.2

No. 1 Phase ("hot") No. 2 Protective ground No. 3 Neutral

# Important:

Before you connect the recorder to the AC power source for the first time, check that the setting of the line voltage selector [4] agrees with your local line voltage.

The following voltages can be set: 100, 120, 140, 200, 220, 240 VAC, ±10%; 50 to 60 Hz.

Disconnect the recorder from the AC outlet before you make any changes! Adjust the line voltage selector [4] with a screwdriver so that the required voltage rating becomes visible through the cutout in the housing.

After the line voltage has been adjusted, the power fuse in the power inlet may possibly have to be replaced with a correctly rated fuse. Lift the cap with the aid of a screw driver. The upper of the two fuses is the spare fuse.

100 V ... 140 VAC: 3.15 A / 250 V (SLOW) 200 V ... 240 VAC: 1.60 A / 250 V (SLOW)

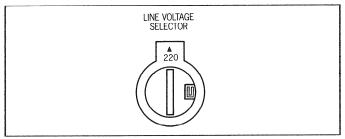


Fig. 2.3.3

# 2.3.2 Line inputs and outputs

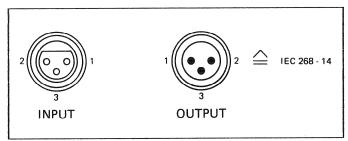


Fig. 2.3.4

The balanced inputs and outputs are terminated on XLR sockets or connectors (described in the IEC recommendation 268-14).

No. 1 Audio ground No. 2 A-line ("hot") No. 3 B-line ("cold") \*

For assymetrical wiring conductor 3 and 1 must be linked.

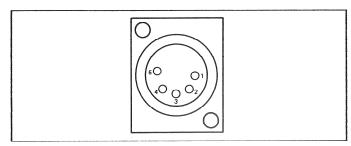


Fig. 2.3.5

The unbalanced AUX INPUT on tape recorders equipped with a stereo monitor penthouse is terminated on a 5-pin XLR connector.

No. 1 Audio ground

No. 2 CH1; A-line ("hot")

No. 3 CH1; B-line ("cold")

No. 4 CH2; A-line ("hot")

No. 5 CH2; B-line ("cold")

# 2.3.3 Microphone inputs

The balanced MIC inputs are terminated on XLR sokkets (described in the IEC recommendation 268-14).

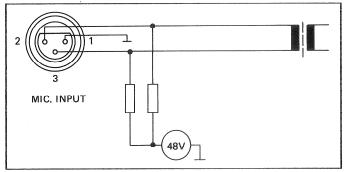


Fig. 2.3.6

No. 1 Audio ground

No. 2 A-line ("hot") NO. 3 B-line ("cold")\*

For assymetrical wiring conductor 3 and 1 must be linked.

The microphone phantom power (48 V or optionally 12V) can be enabled or disabled with switch [16].

#### 2.3.4 Remote control socket

#### Parallel remote control connector

A parallel remote control with the following capabilities can be connected to this 25-pin connector (female, type D):

- Remote control of the tape transport functions with feedback (<, >, PLAY, STOP, REC).
- RESET TIMER (resets the tape timer to 00.00.00).
- ZERO LOC (automatically searches the tape timer address 00.00.00).
- LOC START (automatically searches the tape address at which the last PLAY or RECORD command was entered).
- LIFTER (disables the tape lifter in spooling mode).
- FADER (enables the fader start circuit).
- VARISPEED (variable tape speed).

Connector set Part No. 20.020.303.16 Connector housing, 25-pin Part No. 54.13.7022 Connector, 25-pin, coded Part No. 10.217.001.06

#### Pin assignment of the PARALLEL REMOTE connector:

Pin	Signal name	Designation	
01	+ 0.0	Ground (GND, D V)	
02	BR-REW *	Status indicator lamp REWIND	
03	BR-FORW *	Status indicator lamp FORWARD	
04	BR-VRSPD *	Status indicator lamp VARISPEED (al-	
1 1		ternatingly LOW and HIGH, when active)	
05	SR-VRSPD -	Switch for VARISPEED command	
06	SR-FADRY -	Switch for FADER START READY command	
07	BR-LOCST *	Status indicator lamp LOC START	
08	BR-FADRY *	Status indicator lamp FADER START	
1 1		READY	
09	BR-REC *	Status indicator lamp RECORD	
10	ST-RESET -	Switch for RESET TIMER command	
11	FAD1	Input FADER START command, line A	
12	FAD2	Input FADER START command, line B	
		(FADER START is active when 5V to 24V	
		DC or AC are applied across pins 11	
		and 12)	
13	IR-REFEX	Input for external capstan PLL-refe-	
1 1		rence (nominal: 9,6 kHz, TTL level	
1 1		recommended; max. input voltage +10V)	
14	SR-OLOC -	Switch for ZERO LOC command	
15		Status indicator lamp PLAY	
16		Status indicator lamp STOP	
17		Switch for LIFTER command	
18	SR-LOCST -	Switch for LOC START command	
19	SR-REC -	Switch for RECORD command	
20		Switch for REWIND command	
21	SR-FORW -	Switch for forward COMMAND	
22	SR-PLAY -	Switch for PLAY command	
23	SR-STOP -	Switch for STOP command	
24	KEY	Connector coding	
25	+ 24VRMT	+24V supply (max. 300 mA)	

- \* Open collector output, active LOW. No internal pull-up resistor. Maximum HIGH level +30 V, maximum current 200 mA.
- Switch input. LOW level activates the command. Internal pull-up resistor, 3.3  $k\Omega$  to +24 V. Maximum HIGH level = +30 V.

Logical levels: LOW = 0 V to +7,5 V; HIGH = +12 V to +30 V.

#### Connector for external synchronizer

A 25-pin connector (female, type D) is available for connecting an external synchronizer.

Connector set Part No. 20.020.303.15 Connector housing, 25-pin Part No. 54.13.7022 Connector 25-pin, coded Part No. 10.217.001.05

### Pin assignment of the SYNCHRONIZER connector:

	-	
Pin	Signal name	Designation
01	+ 0.0	Ground (GND, O V)
02	BR-REW *	Status indicator lamp REWIND
03	BR-FORW *	Status indicator lamp FORWARD
04	BR-VRSPD *	Status indicator VARISPEED (alterna-
		tingely LOW ang HIGH when active)
05	SR-VRSPD -	Switch for VARISPEED command
06		
07	OR-MVCLK *	Output for TAPE MOVE CLOCK signal
		(16 pulses/s at 7.5 ips, pulse duty
		factor 50%)
08		Connector coding
09		Status indicator lamp RECORD
10	OR-MVDIR *	Output for TAPE MOVE DIRECTION signal
1		(REW. = LOW, FORW. = HIGH).
11	OR-CMCLK *	Output for CAPSTAN MOTOR MOVE CLOCK
12		signal (1200 pulses/s at 7.5 ips)
12	OR-SYENB *	Output for SYNCHRONIZER ENABLE signal
		(LOW when tape is tensioned and the
		recorder is operational, HIGH when
13	TR-REFEX	the tape is not tensioned).
13	IN-NEFEX	Input for external capstan PLL refe-
		rence (nominal:9.6 kHz, TTL level re- commended: max. input voltage +30 V).
14	+ 0.0	Ground (GND. 0 V)
15		Status indicator lamp PLAY
16		Status indicator lamp STOP
17		Switch for LIFTER command
18	SR-MUTE -	Switch for MUTE command (no influence
		on time code channel)
19	SR-REC -	Switch for RECORD command
20	SR-REW -	Switch for REWIND command
21	SR-FORW -	Switch for FORWARD command
22	SR-PLAY -	Switch for PLAY command
23	SR-STOP -	Switch for STOP command
24	KEY	Connector coding
25	+ 24VRMT	+24V supply (max. 300 mA)

- \* Open collector output, active LOW. No internal pull-up resistor. Maximum HIGH level +30 V, maximum current 200 mA.
- Switch input. LOW level activates the command. Internal pull-up resistor, 3.3 k $\Omega$  to +24 V. Maximum HIGH level = +30 V.

Logical levels: LOW = 0 V to +7.5 V; HIGH = +12 V to +30 V.

#### Connector for RS232 serial interface

A terminal with RS232 interface or a serial remote control unit can be interfaced to this connector.

Connector set

Part No. 20.020.303.07

Pin assignment of the RS 232 connector

Pin	Signal name	Designation
01		
02 03	SN-DATA	DATA signal output from transp.
04		
05 06	+24VRMT	+24V supply (max. 300 mA)
07		
08 09	RCVDATA O,O V	Data signal input to transp. GROUND

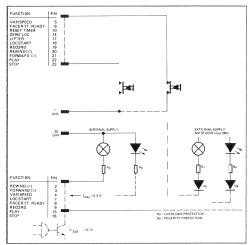


Fig. 2.3.7 Connection diagram, parallel remote control

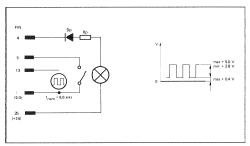


Fig. 2.3.8 Connection diagram, varispeed control

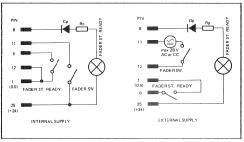


Fig. 2.3.9 Connection diagram, fader start circuit

#### Important:

When incandescent bulbs are used as status indicator lamps, their surge current must not exceed 0.3 A

#### 2.3.5 Headphones socket

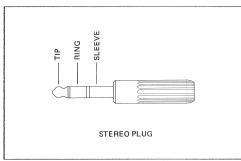


Fig. 2.3.10

TIP = Left-hand channel RING = Right-hand channel

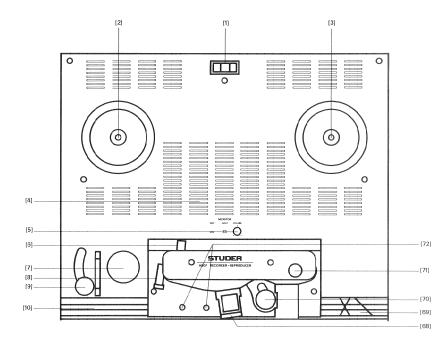
SLEEVE = Ground

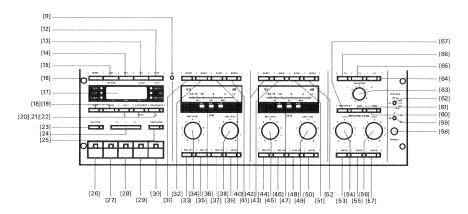
STUDER REVOX

A8D7

Section 2/6

#### 2.4 OPERATING INSTRUCTIONS





#### 2.4.1 Machine handling

C13

Power switch, switches the tape recorder on and off.

[23

Left-hand reel support, supply motor.

[3]

Right-hand reel support, take-up motor.

[4]

Monitor speaker (only in versions without instrument panel).

(5) VOLUME

Volume control for the monitor speaker [4] or for the headphone [58]. When this button is pressed, the tape reproduce signal is selected; when the button is out, the input signal is selected.

[6]

Tape lift slide.

[73

Tacho roller, tape move sensor.

[8]

Light barrier for detecting the transparent leader or a torn tape. Also stops the tape timer.

гот

Tape sensor lever, monitors the tape tension.

[10]

Splicing block.

[11] adj

Microswitch, switches the tape recorder to alignment mode for programming the audio parameters or, when pressed together with the SHIFT [18] key, switches to the soft jumper program (refer to paragraph 2.5.3 and 2.5.4).

Use a pencil or an other pointed tool to operate the microswitch "adj.". Press microswitch adj again to go back to the normal operating status.

Some of the keys change there function after pressing the microswitch "adj.", the yellow printed function of those keys are now valid.

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
[12] STEP In SET mode [14] increases by one the number selec- ted by key [13]. [13] SEL	store Stores the adjusted audio Parameter.	store Stores the selected con- dition of the desired Softjumper – function.
Selects in SET-mode [14] a digit to be changed. The selected digit flashes.  [14] SET  In STOP mode changes between normal time indication and the SET - (input) mode (first digit flashes). In play - or wind mode it freezes time display to be transfered into Locatememory (time freeze). It works in LAP - mode [15] as well.	param Selects in the audio - alignment mode the next parameter (level, treble, bias).	

varispeed, tape speed, mono/insert, fader ready

for recording).

Key function in "SHIFT" & Key function in "adj" mode: Normal key function: "adi" mode: [15] LAP channel Second independent coun-Selects an audio channel Selects a softjumper ter, allows e.g. to measure the duration of a for adjustment. A1=channel 1 Example: piece of music without interfearing with counting of the 150 the A2=channel 2 00 main Function or status counter. of selected soft-The second counter is not jumper influenced by the SETmode keys [12-14] but can be set to zero by pres-\_softjumper sing the RESET [16] key at any time. The active LAP-function is shown by the red LED LAP in the display window [17]. [16] RESET Reset key. Sets the tape timer or the LAP timer to zero (00.00.00). [17] DISPLAY Real-time tape counter with indication of the Audio parameter adjustment Softjumper status indication indication. The three LED's indicate the actual playing time for all tape speeds, in hours, A flashing decimal point infollowing: dicates that the softjumper minutes, and seconds. Can be changed over for dis-playing a second timer status or value has not been In reproduce mode: lvl = repro level stored. (LAP [15] key) for relative adjustment active trbl= repro treble time measurement with operator selectable readjustment active bias= (not possible) ference. Indicator LED for selected tape speed, second timer (LAP), and FADER READY In sync mode: lvl = Sync level adjustment active (FAD). trbl= Sync treble adjustment active bias= (not possible) Flashing dots: A locate address is dis-In record mode: played lvl = record level adjustment active trbl= record treble adjustment active bias= bias adjustment active A flashing decimal point in the display indicates the active adjustment has not been stored. [18] SHIFT Setup key for alternate functions (reverse play, library wind, soft jumper programming), and functions that need to be activated by pressing two keys for safety reasons (tape type or equalization standard,

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
When the SHIFT [18] key and subsequently a locator key is pressed, the stored address is displayed for approx. 4 seconds, without the locate function being performed.		
Zero locator. Positions the tape at the tape address 00.00.00. When this key is pressed in LAP mode [15], the LAP function is switched off and the tape is positioned at the actual zero address of the main timer. The reproduce mode as well as the record mode can be preselected while the tape is positioning. The LEDs of the preselected functions flash.		
Address locator 1. Positions the tape at the address stored with the key combination SET [14] and LOC 1 [20]. The reproduce mode as well as the record mode can be preselected while the tape is positioning; the LEDs of the preselected functions flash. The locator address is displayed for as long as this key is held down, and the two decimal points flash. If this key is pressed in LAP mode [15], the LAP function is switched off and the tape is positioned at the actual LOC 1 address of the main timer. The stored address always relates to the actual tape address i.e. when the tape timer is set to zero with RESET [16], the locator address is automatically converted.  When the key combination SHIFT [18] and accordingly LOC 1 [20] is pressed, the stored locator address is displayed briefly without		

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
[21] LOC START  LOC 2  LOOP  In the LOC START setting, the programmable key [21] positions the tape automatically at the address at which the last PLAY or record command was entered (from standstill of the tape). The reproduce mode as well as the record mode can be preselected while the tape is positioning (provided a channel has been switched to READY); the LEDs of the preselected functions flash.	down  Decreases the value of the active alignment parameter (level, treble, bias) selected with key [13] (param) of the corresponding channel choosen by key [15].	down  Decreases the value of the softjumper status selected with key [15] or switches the corresponding function off.
When LOC 2 is programmed, a second address locator is available as for LOC 1 [20].		
When LOOP is programmed, a loop between the tape address OO.OO.OO and the address stored in LOC 1 is executed. The loop always starts at the lower of the two tape addresses.  When the key combination SHIFT [18] and accordingly LOC START / LOC 2 [21] is pressed, the stored address is briefly displayed without causing the tape to be positioned at this address.		
[22] BACKSPACE  LOC 3  FADER READY  LIFTER  LOC START  In the BACKSPACE setting the programmable key [22] activates the rewind function at approx. the 4-time reproduce speed for as long as this key is held down. The tape will not be lifted off the soundheads. The machine switches to PLAY mode as soon as this key is released.	up Increases the value of the active alignment parameter (level, treble, bias) selected with key [13] (param) of the corresponding channel choosen by key [15].	up Increases the value of the softjumper status selected with key [15] or switches the corresponding function off.
In the LOC 3 programming setting a third address locator is available that functions analogously to LOC 1 [20].  In the FADER READY setting the key can be used to ready the fader start. This function is acknowledged by the red FAD LED in the display window [17].		

Normal key function:	Key function in "adj" mode:	Key function in "SHIFT" & "adj" mode:
If at least one channel is switched to READY [31/42], the machine can be readied for recording by simultaneously pressing SHIFT [18] and FADER READY [22] (the yellow LED next to the FADER READY key flashes). When the fader potentiometer is opened, the machine starts immediately in record mode.		
The LIFTER function defeats the tape lift in spooling mode. This key can either be programmed as an on/off switch or as a momentary action push button.		
When LOC START is programmed, this key performs the same functions as LOC START [21].		
[23] SHUTTLE Editing mode, tape tension control is enabled and the audio path is active. The tape can be moved forward or backward to the desired position by manually turning the righthand tape reel [3]. When the SHUTTLE key is pressed a second time, the editing mode is cancelled.		
[24] SHUTTLE CONTROL Rotary wheel for motor-assi- sted editing mode with acti- vated SHUTTLE function [23].		
[25] TAPE DUMP Switches the "waste basket mode" on and off. The right-hand spooling motor is disabled. Mode A or B can be selected by changing over the programming switch (jumper JS4) below the cover.	input In models without output se- lector, the input signal is connected directly to the output for setting the inter- nal audio level when this key is pressed.	
Mode A:  The TAPE DUMP [25] key functions as a preselector switch. The "waste basket" mode is activated with the PLAY [28] key. The tape is played but not wind up.  The loose tape can be rewound onto the left-hand tape reel [2] by pressing the < [26] key. In this mode it is possible to play a loose piece of tape without winding the tape onto the reel (described in paragraph 2.4.25).		
Mode B:  The "waste basket" mode is activated directly with the TAPE DUMP [25] key. The machine stops when this key is pressed a second time.		

#### [26] <

Key for rewinding of the tape at high speed. The tape is wound on the left-hand reel. Rewinding at reduced speed (librarywind) is possible by simultaneously pressing SHIFT [18] and < [26].

Key for spooling the tape forward at high speed. The tape is wound on the right-hand reel. Spooling forward at reduced speed is possible by simultaneously pressing SHIFT [18] and > [27].

Key for replaying the tape. This key is pressed together with the REC [30] key for activating the recording mode. REVERSE PLAY is activated by pressing SHIFT [18] and PLAY [28] simultaneously. If no tape is inserted (tape tension sensor in idle position, light barrier not covered), the capstan motor can be switched on with the PLAY key [28] for cleaning the capstan shaft.

This key cancels all tape transport functions and all selected operating modes except the preselection of the TAPE DUMP [25] mode A.

Record key. Depending on the programming it may only be effective in conjunction with the PLAY [28] key. Recordings can only be made on the enabled channel(s) (READY [31/42]). If no channel is switched to READY, the record command will be ignored. Mode A or B can be selected by changing over the programming switch (jumper JS3) below the cover.

# Mode A:

Both keys, PLAY [28] and REC [30] must be pressed for activating the record mode.

# Mode B:

To switch from reproduce to record mode, only the REC [30] key needs to be pressed; but for activating the record function from STOP mode, the PLAY [28] and the REC [30] key have to be pressed.

#### Please note:

The operating controls 31-57 are not equipped on all tape recorder versions

Readies channel 1 (left) for recording. The red LED next to the key flashes. While a recording is in progress, this LED is continuously lit.

#### C321 INPUT

Output selector channel 1. The level of the input signal is indicated on the VU-meter [36]. This signal can also be heard via the XLR output, the monitor speaker [4], and the headphones [58].

Microphone attenuator channel 1. The input signal on the MIC INPUT CH1 socket is attenuated by approx. -28 dB.

#### 1341 MIC LEVEL

Input volume potentiometer channel 1 for adjusting the sensitivity of the microphone input MIC INPUT CH1.

Switches the microphone input channel 1 on and off. When the line input is simultaneously activated with the LINE ON [37] key, the two signals will be mixed.

# [36] VU-METER

Output meter for channel 1 with three peak indicator LEDs for +6, +9, and +12 dB relative to 0 VU.

#### [37] LINE ON

Switches the LINE INPUT CH1 on and off. When the microphone input is simultaneously activated with the MIC ON [35] key, the two signals will be mixed.

#### 1381 LINE LEVEL

Input level potentiometer for the LINE INPUT CH1. Only enabled when the UNCAL [39] key has been selected for uncalibrated record mode.

Activates the uncalibrated record mode for channel 1. The record level can be adjusted with the LINE LEVEL [38] potentiometer.

#### [40] SYNC

Output selector channel 1. The audio signal is reproduced from the record head with limited frequency response. Synchronous recording of channel 2 to an existing recording on channel 1 is possible. The VUmeter [36] indicates the level of the SYNC reproduce signal. The SYNC signal can also be monitored via the XLR output, the speaker [4], and the headphones [58].

#### [41] REPRO

Output selector channel 1. The audio signal is reproduced from the reproduce head. The VU-meter [36] indicates the level of the reproduce signal. The REPRO signal can also be monitored via the XLR output, the speaker [4], and the headphones [58]. This function can also be activated while a recording is in progress in order to continuously monitor the quality of the recording (tape/source monitoring).

#### [42] READY

Record ready for channel 2 (right), the red LED next to the key flashes. This LED is continuously lit while a recording is in progress.

#### [43] INPUT

Output selector channel 2. The VU-meter [47] indicates the level of the input reproduce signal. This input signal can also be monitored via the XLR output, the speaker [4], and the headphones [58].

#### [44] MIC ATT

Microphone attenuator channel 2. The input signal on the MIC INPUT CH2 socket is attenuated by approximatly -28dB.

#### [45] MIC LEVEL

Input level potentiometer channel 2 for adjusting the sensitivity of the MIC INPUT CH2.

#### [46] MIC ON

Switches the microphone input channel 2 on and off. When the line input is simultaneously activated with the LINE ON [48] key, the two signals will be mixed.

#### [47] VU-METER

Output meter for channel 2 with three peak indicator LEDs for +6, +9, and +12 dB relative to 0 VU.

#### TART LINE ON

Switches the LINE INPUT CH2 on and off. When the microphone input is simultaneously activated with the MIC ON [46] key, the two signals will be mixed.

#### [49] LINE LEVEL

Input level potentiometer for the LINE INPUT CH2. Only enabled when the UNCAL [50] key has been selected for uncalibrated record mode.

#### (50) UNCAL

Activates the uncalibrated record mode for channel 2. The record level can be adjusted with the LINE LEVEL [49] potentiometer.

# [51] SYNC

Output selector channel 2. The audio signal is reproduced from the record head with limited frequency response. Synchronous recording of channel 1 to an existing recording on channel 2 is possible. The VU-meter [47] indicates the level of the SYNC reproduce signal. The SYNC signal can also be monitored via the XLR output, the speaker [4], and the headphones [58].

#### [52] REPRO

Output selector channel 2. The audio signal is reproduced from the reproduce head. The VU-meter [47] indicates the level of the reproduce signal. The REPRO signal can also be monitored via the XLR output, the speaker [41, and the headphones [58]. This function can also be activated while a recording is in progress in order to continuously monitor the quality of the recording (tape/source monitoring).

#### (53) UNCAL

Activates the uncalibrated record mode. The output level of channel 1 can be adjusted with the REPRO/SYNC LEVEL CH1 [54] potentiometer.

# [54] REPRO/SYNC LEVEL CH1

Output level potentiometer for channel 1. In the UNCAL [53] position, the reproduce amplifier output level (LINE OUTPUT CH1) can be adjusted.

# [55] MONO / INSERT

This key activates the internal audio insertion point (in stereo models for the optional mono/stereo switch). To prevent unintentional operation, it can only be selected in conjunction with the SHIFT [18] key (press and hold SHIFT, then also press MONO / INSERT). The MONO/INSERT mode is signalled by a green LED. When the insert point is not used, this key is disabled by means of JUMPER JP17 located below the cover.

# [56] REPRO/SYNC LEVEL CH2

Output level potentiometer for channel 2. In the UNCAL [57] position the reproduce amplifier output level (LINE OUTPUT CH2) can be adjusted.

#### [57] UNCAL

Activates the uncalibrated reproduce mode. The output level of channel 2 can be adjusted with the REPRO/SYNC LEVEL CH2 [56] potentiometer.

#### C581 PHONES

Headphones socket. The built-in monitor speaker is automatically switched off when the headphones jack is inserted. The Tape/source reproduce level of the headphones can be adjusted with the VOLUME [5] potentiometer.

#### [59] dB

Booster amplifier (only on models with optional TEST GENERATOR). Depending on the switch setting the input signal is attenuated by -10 or -20 dB and the output signal boosted by +10 or +20 dB.

#### [60] NAB

TAPE B

SECOND REPRO HEAD (RIGHT)

Programmable key for changing over the equalization to the NAB standard, the calibration data of a second tape type TAPE B, or for activating the optional second reproduce head (HEAD B). To prevent unintentional operation, it can only be changed over in conjunction with SHIFT [18] (press and hold SHIFT key and also press NAB key). The method of programming key [60] is described in paragraph 2.5.

#### [61] CCIR

TAPE A

REPRO HEAD LEFT

Programmable key for changing over the equalization to the CCIR standard, the calibration data of type TAPE A, or for activating the main reproduce head (HEAD A) if two reproduce heads are installed. To prevent unintentional operation, it can only be changed over in conjunction with SHIFT [18] (press and hold SHIFT key and also press CCIR key). The method of programming key [61] is described in paragraph 2.5.

Test generator (only on models with the optional TEST GENERATOR). Depending on the switch setting a sine wave signal (O VU) with a frequency of 60 Hz, 125 Hz, 1 kHz, 10 kHz or 16 kHz is fed to the input. In the OFF position the test generator is disabled. To prevent mixing of the test generator signals with the inputs, the functions MIC ON [35/46] and LINE ON [37/48] should be switched off.

#### [63] DEVIATION

Potentiometer for continuously varying the tape speed in "varispeed", mode (VARISPEED [67] key) within the range of ±7 semitones (-35%, +54%) relative to the selected nominal speed (at 3.75 ips the range is: +7, -1.5 semitones).

#### [64] 15 (30)

Speed selector 15 ips (30 ips for HS versions). To prevent unintentional operation, jumper JP13 below the cover can be set in such a way that this key is only enabled in conjunction with the SHIFT [18] key (press and hold SHIFT key and also press 15 (30) key).

Speed selector 7.5 ips (15 ips for HS versions). To prevent unintentional operation, jumper JP13 below the cover can be set so that this key is only enabled in conjunction with the SHIFT [18] key (press and hold SHIFT key and also press 7.5 (15) key).

Speed selector 3.75 ips (7.5 ips for HS versions). To prevent unintentional operation, jumper JP13 below the cover can be set in such a way that this key is only enabled in conjunction with the SHIFT [18] key (press and hold SHIFT key and also press 3.75 (7.5) key).

# [67] VARISPEED

Activates the varispeed mode. In this mode the tape speed can be varied with the DEVIATION [63] potentiometer. To prevent unintentional activation, this key is only effective when pressed in conjunction with SHIFT [18] (press and hold SHIFT and also press the VARISPEED key).

Head shield in front of the reproduce head(s). Can be opened and closed by hand.

Cutting block for cutting the tape.

#### $\Gamma$ 7 $\Omega$ 1

Pinch roller. Presses the tape against the capstan shaft. In spooling mode, cueing of the tape is possible by pressing the pinch roller toward the capstan shaft. The closer the tape is moved to the capstan shaft, the louder the signal. The pinch roller cannot be pressed completely against the capstan!

#### F717

Scissors are available as an option, but can only be installed in place of the optional second reproduce head. The tape is cut by antimagnetic scissors at an angle of 30° (±30°) when the cutter button is pressed.

#### [72]

Optional tape marker for identifying a splicing point in front of the reproduce head.

#### 2.4.2 Power switch [1]

#### Caution:

Before you connect the tape recorder to the AC outlet, check that the setting of the line voltage selector agrees with the local mains voltage. The fuse rating must be checked whenever the setting of the line voltage selector has been changed (paragraph 2.3.1).

The power switch [1] is located at the top edge of the tape deck cover.

When the tape recorder is switched on, the operating state that existed when the machine was switched off is automatically reestablished and displayed. The software release date (WW.YY = week year) is shown on the display [17] for a few seconds. The last timer reading is subsequently displayed.

#### Exception:

Tape transport functions that were active when the machine was switched off are not restarted, and the channels that were set to READY and the varispeed mode are disabled. The tape recorder is always switched to STOP [29]. When a tape is inserted, the yellow LED of the STOP key is continuously lit. If there is no tape or if the tape is slack, the LED flashes for approx. 10 seconds and then switches off.

# 2.4.3 Indications at power on time

After the machine has been switched on, the VU-meters [36/47] are illuminated and the software date is shown on the display [17]. The following indications are also possible. They signal the current operating state of the tape recorder:

- Display: The last tape address is indicated.
- Locator addresses are saved.
- STOP: The stop function is active. If the LED flashes for approx. 10 s and then switches off, there is no tape inserted or the inserted tape is slack.
- CCIR (TAPE A / REPRO HEAD LEFT) or NAB (TAPE B / REPRO HEAD RIGHT): the selected equalization standard (tape type / reproduce head) is indicated.
- 3.75 7.5 15 or 30: The selected tape speed is indicated next to the display [17] and on the speed selector keys [64/65/66].
- Input selector: The selected input is indicated with MIC ATT [33/44], MIC ON [35/46]. LINE ON [37/48] or UNCAL [39/50].
- Output selector: The selected output is indicated with INPUT [32/43], SYNC [40/51], or REPRO [41/52].
- Output level: Uncalibrated output level is indicated by the red LED next to the UNCAL [53/57] keys.
- MONO/INSERT [55] is indicated if a corresponding option is installed and if it was selected before the machine was powered off. On models equipped with an instrument panel the channel selection for the monitor output is also indicated.

#### 2.4.4 Inserting the tape

The tape recorder is normally equipped with 3-pronged adapters. For NAB reels and self-supporting pancakes with hubs, special adapters are available.

#### Three-pronged reel (DIN 45514, 45517)

Mount the full reel on the left-hand spindle [2], the empty reel on the right-hand spindle [3]. Pull out the three-pronged guide and lock it with a 60° turn.

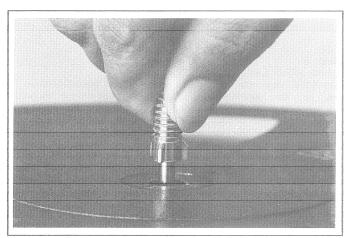


Fig. 2.4.2

#### NAB reel

Mount the NAB adapters on the two spindles [2/3] and lock them by pulling out the three-pronged guides and giving a 60° turn. Mount the full NAB reel on the left-hand NAB adapter, the empty reel on the right-hand NAB adapter. To lock the tape reels turn the top section of the adapter clockwise until it engages.

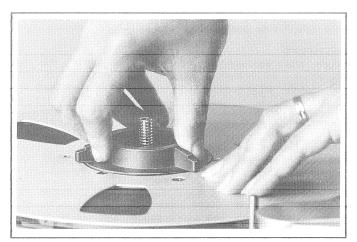


Fig. 2.4.3

# Self-supporting pancakes with hub (DIN45515)

Mount the adapter discs on the reels [2/3] in such a way that the two pins engage in the spindle. Lock the discs by pulling out the three-pronged guides and giving a  $60^\circ$  turn. Mount the full pancake on the left-hand adapter disc and the empty hub on the right-hand adapter disc. To lock the hubs give the adapter lug a  $90^\circ$  turn.



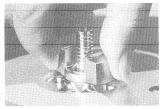


Fig. 2.4.4

#### Threading the tape

Thread the tape as illustrated. It must be threaded exactly around the tape tension sensor [9], the tacho roller [7], through the light barrier [8], and over the soundheads. Pull the leading end of the tape over the pinch roller [70] (the pinch roller can be moved to the idle position by actuating the tape lifter [6]), and around the right-hand guide roller. Thread the tape on the right-hand reel and secure the tape by giving the right-hand reel a few counterclockwise turns. If the tape starts with a transparent leader, continue to press the pushbutton X[27] or PLAY [28] until the oxide coating has passed the light barrier [8]. Set the tape timer to zero by pressing the RESET [16] key.

If the tape is always set to zero at the same address, the tape can be repeatedly positioned at any address by means of the real-time tape counter [17].

If necessary, raise the head shield [68] in front of the reproduce head(s).

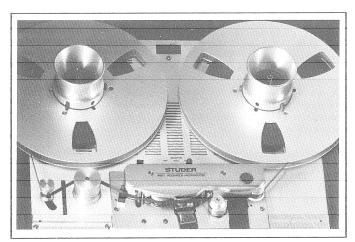


Fig. 2.4.5

# 2.4.5 Tape speeds [64/65/66]

Three tape speeds are available. Depending on the model, three of the following four speeds can be selected: 3.75/7.5/15/30 ips. The speed is selected by pressing the corresponding key [64/65/66]. The LED in the key lights up. If correspondingly programmed, the speed selection is interlocked with the SHIFT [18] key. In this case a speed can only be selected by holding the SHIFT [18] key down while you select the desired tape speed.

#### 2.4.6 Play mode

PLAY [28]

When the local PLAY key [28], a corresponding remote control button, or a fader start device is actuated (possibly via the FADER READY key), the tape recorder switches to play mode. The yellow LED above the PLAY key lights up.

The play mode can be cancelled by pressing the STOP [29] key or any other tape command key (except fader start mode A, B or C).

If the PLAY key is pressed while a recording is in progress (REC), the machine switches to play without interruption and the record mode is cancelled.

If the PLAY key is pressed in spooling mode, the tape is immediately decelerated and the play function is preselected. As soon as the tape has come to a standstill or achieved the nominal speed in the play direction, the machine switches to play mode.

Any tape transport function can be selected independently of the current operating state of the machine. The microprocessor checks automatically the validity of the command and protects the tape by first decelerating it before the opposite sense of rotation or a slower speed is activated. A SHUTTLE or locator function can also be selected directly.

When no tape is mounted (tape tension sensor in idle position, light barrier not covered), you can switch on the capstan motor for cleaning the shaft by pressing the PLAY [28] key. The motor rotates for as long as the key is pressed.

# 2.4.7 Reverse play mode REVERSE PLAY

By simultaneously pressing the SHIFT [18] and PLAY [28] keys, the tape recorder can be switched to REVERSE PLAY for searching a tape location or for achieving special effects. Any tape transport command, including the SHUTTLE and the locator function can be selected directly from reverse play mode.

#### 2.4.8 Varispeed control [64/67]

In reproduce as well as record mode, the variable tape speed can be selected by simultaneously pressing the two keys SHIFT [18] and VARISPEED [67]; the red LED next to the VARISPEED key flashes.

The deviation from the nominal tape speed can be selected with the DEVIATION [63] potentiometer within the range of  $\pm 7$  semitones (+7 to -1.5 semitones at 3.75 ips). The tape speed can also be altered by means of an external varispeed control (option). When the external varispeed control is activated, the internal control frequency is automatically disabled.

#### Notes:

The delay time for the drop-in and drop-out is matched to the corresponding nominal speed; these delays are not adjusted in varispeed mode!

The indication of the tape timer no longer corresponds to the true elapsed time but rather to the playing time at nominal speed.

# 2.4.9 Record mode REC [30]

The information in this Section does not apply to "playback only" models (PBO) !

When the REC [30] and the PLAY [28] keys are pressed simultaneously, the tape recorder switches to record mode provided at least one channel has been enabled with the READY [31/42] key and the red LED next to the key flashes. During a recording the LEDs of the REC [30], PLAY [28], and READY [31/42] keys are continuously lit.

The setting of jumper JPO3 below the front cover can be changed in such a way that the record mode can be activated from play mode by simply pressing the REC [30] key (but PLAY and REC still have to be pressed to enable recording from the STOP condition).

From record mode it is possible to switch directly to fast wind, play or a locator function by pressing the corresponding key. The STOP [29] command immediately interrupts the record mode. Channels that are switched to SYNC reproduction automatically switch to INPUT with the drop in and back to SYNC with the drop out.

# Drop-in

Click-free changeover from SYNC reproduction to record mode is possible. Depending on the jumper setting, this is possible by either pressing REC [30] together with PLAY [28] or only the REC [30] key.

The record head is switched on with a speed-dependent delay so that the erase head and the record head are enabled at exactly the same tape location.

#### Drop-out

Click-free changeover from record mode to SYNC play mode is possible by pressing the PLAY [28] kev.

The record head is switched off with a speed-dependent delay so that the erase head and the record head are switched off at exactly the same tape location.

#### Notes:

Since the machine interrupts a recording immediately when the STOP [29] key is pressed, the drop-out process can no longer be executed. For joining recorded segments without a gap it is necessary to switch from record to PLAY before STOP is activated. For the drop-in we recommend that you first switch to PLAY [28] and then to record (in order to prevent inaccuracies caused by the tape start).

#### Overlapping drop in

If e.g. applause is to be faded in with overlap at the end of a recording, the tape can be lifted off the erase head by means of the tape lifter [6]. The machine is then restarted in record mode and the tape lifter slowly released. The tape first contacts the record head and the applause is added to the existing modulation. When the tape lifter is released, the tape also contacts the erase head. The existing modulation is erased and only the applause is recorded.

### 2.4.10 SYNC reproduction SYNC [40/51]

The SYNC [40/51] key switches the corresponding channel to SYNC reproduction. This means that the audio signals are not supplied by the reproduce head but by the record head via the reproduce amplifier.

Since there is no time offset between record and reproduce in this mode, it is possible to add a synchronous recording to a channel with an existing recording (e.g. vocalization of instrumental music).

Procedure: Synchronous recording to channel 1

- Switch channel 1 to SYNC [40].
- Switch channel 2 to READY [42] and connect MIC to CH2. Select MIC ON [46] and adjust the sensitivity with the potentiometer [45]. (Possibly activate the attenuator [44], switch the phantom power on or off).
- Start the machine in record mode
- Monitor the music of channel 1 via the headphones [58] and add the vocal part via the microphone.

For technical reasons, the reproduce frequency response is limited to approx. 6 kHz at 3.75 ips, 10 kHz at 7.5 ips, 12 kHz at 15 ips, and 12 kHz at 30 ips. A degradation in quality is, therefore, inevitable with SYNC reproduction.

#### SYNC preselection:

SYNC reproduction can be preselected for a channel that has been readied for record mode. When the SYNC [40/51] key is pressed during a recording, the corresponding channel is connected to INPUT. This channel is automatically switched to SYNC reproduction when the drop-out occurs (PLAY, STOP).

#### 2.4.11 Spooling mode

< > [26/27]

The < [26] key activates fast wind in the reverse direction, the > [27] key in the forward direction. The tape will be wound at the maximum spooling speed.

The spooling functions are cancelled by STOP [29], PLAY [28], REC+PLAY [30,28], SHUTTLE [23], TAPE DUMP [25], LOC functions and by spooling in the opposite direction.

It is admissible to switch from spooling directly to play or record mode. The LED of the preselected function flashes; the tape is decelerated, and the preselected function is only activated when the tape has come to a stop or reached nominal speed.

#### Tape lifting:

In spooling mode the tape is automatically lifted off the soundheads in order to minimize wear of the tape and audio heads.

# Automatic cueing:

When the programmable LIFTER [22] key is actuated (different functions can be assigned to the keys [21] and [22] by setting the jumpers JPOO, JPOI, and JPO2, see paragraph 2.5) the tape lifter is retracted so that the tape makes contact with the audio heads. Depending on the setting of jumper JPIO, tape lifting is defeated either for as long as the key is pressed or until the key is pressed again.

# Manual cueing:

Cueing in spooling mode is possible by manually pressing the pinch roller [70] toward the capstan shaft. The closer the tape is pushed to the reproduce head, the stronger the output signal. For safety reasons it is not possible to press the pinch roller completely against the capstan shaft.

## Note:

In order to protect the treble speaker of the monitor system from overloads when the cueing function is active in spooling mode, the reproduce level is automatically attenuated by -12 dB.

# 2.4.12 Producing pancakes at reduced spooling speeds. LIBRARY WIND

The reduced spooling speed is intended for pancakes that are to be saved in a library. The tape is wound more gently and, due to the absence of an air cushion between the individual layers, also more tightly.

The library wind function is activated by pressing and holding down the SHIFT [18] key and simultaneously pressing the spooling key < [26] or > [27]. The library wind function is cancelled as soon as any tape transport function is selected.

To ensure that a smooth pancake can be produced with any type of tape, the reduced spooling speed can be individually adjusted with the trimmer potentiometer SHTL located below the left-hand tape splicing block [10].

#### 2.4.13 Stop mode

STOP [29]

The STOP [29] key has the highest priority and cancels all operating states such as play, record, spooling, SHUTTLE, and the LOC functions. The tape is immediately decelerated after this function has been selected.

Any new command entered during the deceleration phase of the tape is stored and immediately activated when the tape speed required for this function is achieved.

# 2.4.14 Locator Z-LOC, LOC1 (-3) [19-22]

Depending how the keys [21] and [22] are programmed, up to three transfer locators and one zero locator are available (for programming refer to paragraph 2.5). All locator addresses refer to the main tape timer. When a locator function is called with auxiliary timer (LAP [15]) activated, the machine switches from the auxiliary timer to the main timer before the locator function is executed. The LAP function remains switched off.

# Z-LOC:

When the Z-LOC [19] key is pressed, the tape is wound forward or backward at high speed until the tape location corresponding to timer address 00.00.00 is reached.

#### LOC START:

Pressing the LOC START [21/22] key initiates fast rewind mode. The tape is then wound to the point where the previous Play- or Record command was entered providing the tape was at stand still when entering the command. The play or record function can be preselected by pressing the corresponding key while the tape is being positioned. The LED of the selected function flashes until the function is performed.

#### LOC1...LOC3:

At least one transfer locator is always available with the LOC1 [20] key. One additional transfer locator each (LOC2, LOC3) can be assigned through corresponding programming of keys [21] and [22].

In this way up to three tape addresses can be stored and automatically searched at high speed by pressing the corresponding key. The locate function can be cancelled by pressing [291, < [261, > [271] or by selecting a different LOC function. As is the case for the LOC START function, the play and record functions can be preselected.

#### Programming the locator addresses:

#### Storing the current tape address:

Position the tape at the desired tape address, press the SET [14] (the first digit in the display [17] flashes), and then the key of the transfer locator (LOC1...LOC3) in which the tape address is to be stored.

# Storing a known tape address:

The locator address can also be entered via the keyboard without positioning the tape. Press the SET [14] key; the first digit in the display flashes. With the STEP [12] key you can now alter the value of the digit in single steps. Then press the SEL [13] key to access the next digit and alter it with the STEP [12] key. Repeat these steps until the tape address to be stored is shown on the display. Store the tape address by pressing one of the locator keys (LOC1...LOC3).

# Reading out a LOC address:

During a LOC process: Press the corresponding LOC key a second time. In any other operating mode: Press the SHIFT [18] key and then the corresponding LOC key. Whenever the display [17] does not indicate the current tape address, the two dots are flashing.

## Note:

The locator addresses always relate to the actual tape address and are automatically converted when the tape counter is set to zero (RESET [16] key). When a different tape speed is selected, the current counter content as well as all locator addresses are recomputed and remain stored even when the tape recorder is switched off.

# 2.4.15 Programmable functions

The programmable keys [21] and [22] (JPOO, JPO1 and JP02) as well as [60] and [61] (JP05, JP06, and JP07) can be assigned to different functions by changing the jumper positions below the front cover. The programming method is described in pragraph 2.5.

Key [21]: LOC START, LOC2 or LOOP.

Key [22]: BACKSPACE, LOC3, LOC START, LIFTER, or FADER READY

Key [60]: NAB, TAPE B, or REPRO HEAD RIGHT. Key [61]: CCIR, TAPE A, or REPRO HEAD LEFT.

The locator functions are described in paragraph 2.4.14.

# LOOP:

This function performs a continuous loop between tape address 00.00.00 and the address stored in LOC 1. The lower of the two addresses (timer reading 00.00.00) or a negative address in LOC 1 is taken as the starting address. When the LOOP key is pressed the tape is positioned at the starting address and the play mode is activated until the ending address is reached. At this point the tape is automatically rewound to the starting address and the play mode is reactivated. This procedure is repeated until the LOOP function is cancelled with the input of a new tape deck command.

#### BACKSPACE:

In this function the tape is rewound at approx. 4 times the reproduce speed (relative to the selected nominal speed) but the tape is not lifted off the soundheads. The reproduce paths are enabled. As soon as this key is released, the machine switches automatically to PLAY.

# LIFTER:

The LIFTER key defeats the tape lifter function in spooling mode, either continuously, i.e. until this key is pressed again, or for as long as this key is pressed. The mode of this switch depends on the setting of jumper JP10 below the front cover. For a detailed description of the LIFTER function refer to paragraph 2.4.11, Tape lifter.

## FADER READY:

Depending on the selected fader start mode (set with jumpers JP11 and JP12 below the front cover), a FADER READY KEY may be required for enabling or disabling the fader start circuit (such a switch is required for mode B, C, and D).

Rather than with an external switch, this function can also be performed with key [22]. When the fader start circuit is enabled (FADER READY), the yellow LED next to the key as well as the FAD LED in the display window [17] are lit to signal the fader ready condition. When this key is pressed again, the circuit is disabled, the LEDs switch off, i.e. opening of the fader has no effect on the tape recorder. When the SHIFT [18] key is pressed together with the built-in fader ready key, the tape recorder starts in record mode when the fader is opened, provided at least one channel is switched to READY [31.42].

# NAB / CCIR:

These keys are used for changing over between NAB [60] and CCIR [61] equalization standard which can individually calibrated. The mathad of keys [60/61] is described in programming the paragraph 2.5.

# TAPE A / TAPE B:

In this mode the keys [60/61] are used for changing over between two individually calibrated tape types (type A and type B). The method of programming is described in paragraph 2.5.

# HEAD A / HEAD B:

In this mode the keys [60/61] are used for switching from the standard reproduce head to the optional second reproduce head. The reproduce level for each reproduce head is individually adjustable. The method of programming is described in paragraph

2.5.

#### 2.4.16 Fader start

With the fader start circuit, the tape recorder can be started in PLAY mode by means of 5V...24V DC or AC applied by a remote control unit between pins 11 and 12 of the parallel remote control socket. In the operating modes (FADER B, C, or D), the fader start must be readied ("FADER START READY") by a switch that interconnects pin 6 (SR-READY signal) and 1 (ground) of the same socket. Direct fader start selection without a ready key is only possible in FADER A mode.

The fader can also be readied with the programmable FADER READY [22] key of the local keypad or on the optional remote control. The function programmed in the tape recorder (FADER B, C, or D) is then performed.

When the SHIFT [18] key is pressed together with the local fader ready key [22], the machine is started in record mode when the fader is opened, provided at least one channel has been set to READY [31/42].

#### Important:

When the FADER READY function is switched off or when both READY [31/42] are cancelled, fader start ready is automatically cancelled.

#### FADER A:

Fader start without FADER START READY key. After the fader start the local keypad and the remote control keys are disabled, the built-in monitor speaker is muted (but not the headphones!). When the fader is pulled back (the fader switch opens), the tape recorder stops, but the built-in monitor speaker is only unmuted when the tape has come to a standstill. The machine can now again be operated.

Fader start with FADER START READY key. In order to activate the fader start function,

the FADER READY key must be selected (FAD LED in the display window [17] is on). After the fader start, the local keypad and the remote control keys are disabled, the built-in monitor speaker is muted (but not the headphones!). When the fader is pulled back (the fader switch opens), the tape recorder stops, but the built-in monitor speaker is only unmuted when the tape has come to a standstill. The machine can now again be operated. If the fader switch is actuated but the fader ready key has not been pressed (FAD LED is dark), the operating state of the tape recorder does not change. Exception: in play mode the built-in monitor speaker is muted when the fader is opened and unmuted when the fader is closed.

Fader start with FADER START READY key.

After the fader ready key has been pressed, the local keypad and the remote control keys are disabled. The machine can only be started by opening the fader. The built-in monitor speaker is muted (but not the headphones!). If the fader switch is actuated but the fader ready key has not been pressed, the operating state of the tape recorder does not change. Exception: in play mode the built-in monitor speaker is muted when the fader is opened and unmuted when the fader is closed.

#### FADER D:

Fader start with FADER START READY key.

Regardless of the position of the fader read switch, the local keypad and the remote control keys remain enabled, even after the fader start. The built-in monitor speaker is muted (but not the headphones!). If the fader switch is actuated but the fader ready key has not been pressed, the operating state of the tape recorder does not change. Exception: in play mode the built-in monitor speaker is muted when the fader is opened and unmuted when the fader is closed.

# 2.4.17 Tape timer

[17]

The electronic tape timer always displays the real tape time in hours, minutes, and seconds, relative to the selected nominal tape speed (exception: varispeed mode).

The timer has a display range -9 h 59 min 59 s to 99 h 59 min 59 s. The timer can be set to zero (00.00.00) by pressing the RESET [16] key. When the end of the tape, a torn tape, or the tape leader is detected, the timer stops automatically. In waste basket mode (TAPE DUMP [25]) the timer continuous to run or stops, depending on the setting of the soft jumper 05 (paragraph 2.5.3). Tape segments can also be timed (paragraph 2.4.18 Auxiliary timer). In "adj" mode (paragraph 2.5.2) the tape timer display shows the setting of the audio parameters; in soft jumper programming mode (paragraph 2.5.3) it shows the setting of the selected software switch. When the SHIFT key is pressed followed by a LOC key, the tape timer displays the content of the locator assigned to the corresponding key.

The locator addresses always relate to the actual tape address and are automatically recomputed when the tape timer is set to zero (RESET [16] key).

# 2.4.18 Auxiliary timer

The LAP [15] key activates a second (auxiliary) tape timer with a user-selectable reference (zero setting). The auxiliary timer mode is signalled by the LAP LED in the display window. The auxiliary timer can be set to zero (RESET [16] key at any tape address and can thus be used for determining the exact playing time of a selection without influencing the main timer or having to compute the difference between the start and the end time. When the LAP [15] key is pressed a second time, the display switches back to the main timer, the LAP LED switches off.

When the LAP function is active, it is not possible to set a locator address. The locator addresses always relate to the main timer. When a locator key is pressed, the LAP function is automatically cancelled, the main timer is activated, and the tape is positioned at the selected locator address.

#### 2.4.19 MONO / INSERT

[55]

2.4.20 Remote control

On two-channel and stereo models with channel selector buttons, this key is labelled with MONO; on all other models with INSERT. However, the actual function is always the same: the internal insert point of the O dB amplifier is activated in the audio input and output path. On stereo models the optional MONO/STEREO switch can be connected into the circuit at this point. A noise reduction system (Dolby) or a supplementary circuit of a different type can also be connected here.

type can also be connected here. The function of the MONO (INSERT) [55] key is enabled by moving the jumper JP17 on the COMMAND PANEL BOARD 1.727.36X.XX to position "B". In addition the straps W2, W3, W7, and W8 on the AUDIO CONTROL BOARD 1.727.40X.XX must be opened so that the audio signals can be looped via the INPUT or the OUTPUT INSERT BOARD (MONO/STEREO SWITCH). With the jumpers JS1 and JS2 on the AUDIO CONTROL BOARD (1.727.400.81 / 401.00) the user can define whether the signal for the built-in monitor speaker is to be tapped before or after the insert point.

To enable this function, the SHIFT [18] key must be pressed and held while the MONO or INSERT [55] key is pressed. When SHIFT and MONO/INSERT are pressed again, the function is switched off.

The various modes of the MONO/STEREO switch are programmed by changing jumper settings:

on the input by setting the jumpers JP1 and JP2 on the M/S INPUT AMPLIFIER 1.727.441.00 / 451.00.

# MONO MODE A:

The input signal of channel 1 is recorded simultaneously on channel 1 and channel 2 (JP1 = A, JP2 = B).

# MONO MODE B:

The input signals of channel 1 and channel 2 are added and the aggregate signal recorded simultaneously on both channels (JP1 = A, JP2 = A).

# MONO MODE C:

The input signal of channel 2 is simultaneously recorded on channel 1 and channel 2 (JP1 = B, JP2 = A).

on the output side by changing the jumpers JP1 and JP2 on the M/S OUTPUT AMPLIFIER 1.727.442.00  $\prime$  452.00.

# MONO MODE A:

The mono reproduce signals of channel 1 and channel 2 are added and reproduced via the output channel 1 (OUTPUT CH1) (JP1 = A, JP2 = B), the output channel 2 (OUTPUT CH2) remains muted.

# MONO MODE B:

The signals of both channels are added and the aggregate signal is simultaneously reproduced via both outputs (OUTPUT CH1, CH2) (JP1 = A, JP2 = A).

# MONO MODE C:

The mono reproduce signals of channel 1 and channel 2 are added and reproduced via the output channel 2 (OUTPUT CH2) (JP1 = B, JP2 = A), the output channel 1 (OUTPUT CH1) remains muted.

The following functions can be remote controlled by means of the parallel remote control unit: play, record, fast wind, stop, reset timer, zero loc, loc start, lifter, varispeed on/off, and fader (fader ready), as well as indirectly also backspace (PLAY +

Status indicator outputs (for external bulbs or LED's) for all above functions are available from the remote plug of the tape recorder. Exeption: Reset-timer, zero-Locate and Lifter. The status indicate output for Fader start ready goes active low to indicate the fader-start-operation possibility. The pin assignment of the remote control socket as well as the connection configuration are described in paragraph 2.3.4.

#### 2.4.21 VU-Meter-Panel

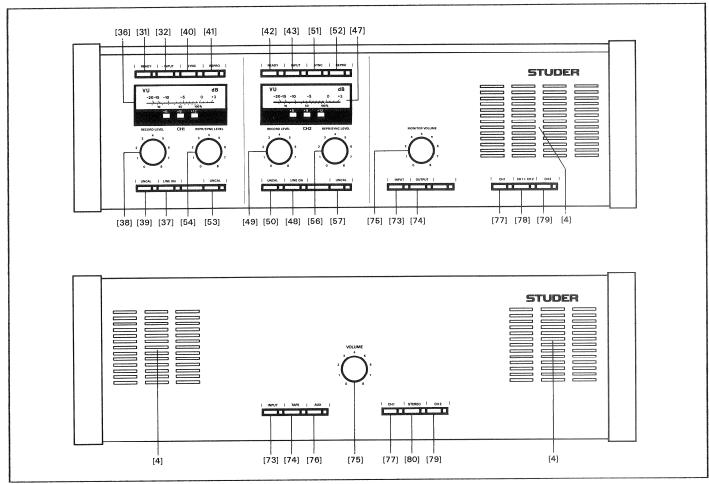


Fig. 2.4.6

On models equipped with an instrument panel (VUK), some of the operator controls and the monitor speaker are installed in a box above the unit. Depending on the machine type, some of the following elements are either installed in an internal or external instrument panel.

# READY [31/42]

Record ready for the corresponding channel, the red LED next to the key flashes. This LED is continuously lit while a recording is in progress. No signals can be recorded on a channel that is not switched to READY.

# INPUT [32/43]

Output selector for the corresponding channel. The input signal from the balanced input (INPUT CH1/CH2) and/or from the microphone (MIC INPUT CH1/CH2, if present), is taken directly to the balanced output (OUTPUT CH1/CH2), to the VU-meter [36/47], and to the monitor speaker [4] and the headphones socket [58] (source monitoring). The monitor switch [5] is therefore permanently connected to INPUT in both settings.

# SYNC [40/51]

Output selector for the corresponding channel. The signal is reproduced from the record head with limited frequency response (paragraph 2.4.10). The signal is taken to the balanced output (OUTPUT CH1/CH2), to the VU-meter [36/47], and to the monitor speaker [4] and the headphones socket [58]. For the duration of the recording it is automatically switched to INPUT. With the monitor selector switch INPUT/OUTPUT or TAPE [5/73/74), the monitor signal of a SYNC reproduction can be switched between tape and source without influencing the output signal on the balanced output (OUTPUT CH1/CH2).

# REPRO [41/52]

Output selector for the corresponding chanel. The signal is reproduced from the reproduce head. The signal is taken to the balanced output (OUTPUT CHI/CH2), to the VU-meter [36/47], and to the monitor speaker [4] and the headphones socket [58]. With the monitor selector switch INPUT/OUTPUT or TAPE [5/73/74], the monitor signal can be switched between tape and source without influencing the output signal on the balanced output (OUTPUT CHI/CH2).

# LINE LEVEL / RECORD LEVEL [38/49]

Input level potentiometer for the LINE INPUT CH1/CH2. When the input amplifier is uncalibrated (UNCAL [39/50] key pressed), the input level can be attenuated or increased by up to 10 dB above the calibrated value.

# MIC LEVEL [34/45]

Input level potentiometer for the MIC INPUT CH1/CH2. The level potentiometers are always enabled when the microphone inputs are switched on (MIC ON [35/46] key). For high-sensitivity microphones, an additional input attenuator (approx. 28 dB) can be connected (MIC ATT [33/44] key).

#### REPRO/SYNC LEVEL [54/56]

Output level potentiometer for the LINE OUTPUT CH1/CH2. When the input amplifier is uncalibrated (UNCAL [53/57] key pressed), the input level can be attenuated or increased by up to 10 dB above the calibrated value.

# 2.4.22 External monitor

#### MONITOR VOLUME [75]

Volume control of the monitor amplifier. Influences the output level of the monitor speaker built into the instrument panel. When the machine is equipped with a stereo monitor panel, the output level of the headphones socket PHONES [58] built into the panel is also influenced.

# INPUT / OUTPUT or INPUT / TAPE [73/74]

Signal selector of the monitor speaker. When the INPUT [73] key is pressed, the signal available on the input is reproduced via the monitor speaker, if the OUTPUT or TAPE [74] key is pressed, the reproduce or SYNC signal from the tape is reproduced via the monitor speaker. If the output selector is set to INPUT [32/43], the input signal will always be reproduced via the monitor speaker, regardless of whether the INPUT [73] or OUTPUT [74] switch is set.

# AUX [76]

On the stereo monitor panel, the AUX [76] can be pressed so that the signal fed to the AUX input of the recorder can be heard via the monitor speaker or the PHONES [58] socket. This signal has no further connection to the recorder. The AUX input is strictly a monitoring channel.

#### CH1 / CH1+CH2 / CH2 [77/78/79]

On two-track or stereo recorders, the channels for the monitor reproduction are selected with these keys. When the CH1 [77] key is pressed, only the signal of channel 1 is reproduced via the monitor speaker. When the CH1+CH2 [78] key is pressed, the signals of both channels are added and reproduced. When the CH2 [79] key is pressed, the second channel is connected to the monitor speaker, analogously to the CH1 [77] key. The signal selected with the INPUT [73], TAPE (or OUTPUT) [74], or AUX [76] key is reproduced.

When CH1 [77] or CH2 [79] is selected on models equipped with a stereo monitor instrument panel, only the left-hand or the right-hand channel is reproduced via the two monitor speakers and the two headphone channels.

# STEREO [80]

When the STEREO [80] key is pressed on the stereo monitor instrument panel, both channels are reproduced stereophonically over the two built-in monitor speakers and the headphones socket PHONES [58].

#### 2.4.23 Test generator (option)

On all 2-channel versions of the A807, a test generator with booster amplifier can be installed (in conjunction with the MONO/STEREO switch [55]) on the right-hand side of the operator panel. The MONO/INSERT [55] key, with which the internal insert point is controlled, can be activated by changing the position of the jumper JP17 (below the front cover) to position B, in this case the generally built in mono/stereo switch is required. To deactivate the built-in Mono/Stereo Switch change Jumper JP17 to position A.

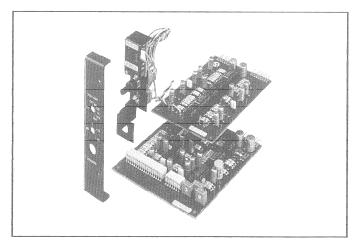


Fig. 2.4.7

The controls of the test generator are accessible from the operator panel and can be adjusted with a screwdriver. The test generator is switched on and the test frequency (60 Hz, 125 Hz, 1 kHz, 10 kHz, 16 kHz) of the sine wave generator is set with the Hz [62] switch. The test generator is disabled when this switch is in the OFF position.

#### Note:

When operating with the test generator, make sure that no signals are available on the inputs (MIC INPUT and LINE INPUT). This signal would be mixed with the generator signal and could lead to measurement errors.

- On models without input selector, the signal cables on the inputs should be detached.
- On models with input selector the inputs should be switched off (MIC ON [35/46] and LINE ON [37/48] in off position).

The booster amplifier is operated with the dB [59] switch. The generator level can be attenuated by 10 or 20 dB. At the same time the gain in the reproduce path is automatically increased by 10 dB or 20 dB; in this way the reference value of the VU-meter is the same as for nominal level. The booster amplifier can also be used when the test generator is switched off, e.g. when playing a reproduce test tape.

#### 2.4.24 Editing, cutting the tape

#### Searching a tape address with fast wind

Any tape address can be searched by means of fast forward > [27] and rewind < [26] keys. However, additional facilities have been provided that may be more convenient:

SHUTTLE [23/24], Z-LOC [19], LOC1 [20], and, depending on the internal programming (Jumpers JP00 to JP02), the keys [21] and [22] which support the following functions:

 C213
 C223

 L0C2
 L0C3

 L0C START
 BACKSPACE

 L0C START
 L0C START

 L1FTER

The locator functions are described in paragraph 2.4.14, the BACKSPACE function in paragraph 2.4.15.

# SHUTTLE [23/24]

The SHUTTLE [23] key activates the editing mode. The tape is not lifted so that cueing is always possible. Editing under assistance of the spooling motors is possible with the aid of the SHUTTLE CONTROL [24] wheel. When this wheel is turned, the tape is spooled in the corresponding direction. The greater the deflection of the wheel from its home position, the faster the spooling speed. An edit point can thus be conveniently searched and approximately aligned.

For fine-positioning of the edit point, the tape can be moved forward or backward by manually turning the right-hand tape reel [3]. The tape tension control and the reproduce paths are enabled.

#### Marking the tape

The center of the reproduce head (head gap) can be marked on the reverse side of the tape by means of a grease pen or a soft pencil.

A tape marker [72] is available as an accessory. A light pressure on the marking lever marks the tape with a stamp exactly at the reproduce head gap. The tape can subsequently be cut at the marked

### Cutting the tape

position.

The tape can be easily lifted off the reproduce head by means of antimagnetic scissors and cut exactly in front of the head gap.

If the position of the reproduce head gap has previously been marked, the tape can be transported up to the optional scissors [71] and cut or be inserted manually into the optional cutting block on the head shield or below the head block, and cut with a rayor blade.

# Splicing the tape

The two tape sections to be joined are inserted with the reverse (marked) side facing upwards the splicing block [10] or the cutting block [69]. The ends are butted together without overlap and spliced with an adhesive tab that is approx. 20 mm long and %" wide.

# 2.4.25 "Waste basket mode" TAPE DUMP [25]

In "waste basket mode" (TAPE DUMP [25] key) the right-hand spooling motor [3] is disabled. Unwanted tape segments can thus be played into the waste basket.

When the TAPE DUMP [25] key is pressed, the machine switches either to play or preselects the "waste basket mode", depending on the programming with the jumper JP4 below the front cover.

# Mode A (JP4 in position L):

The TAPE DUMP [25] key functions as a preselector. The "waste basket mode" is activated by pressing the PLAY [28] key. The tape is played but not wound up.

The STOP [29] key interrupts the tape feed, but the TAPE DUMP function remains active until it is cancelled by pressing the TAPE DUMP [25] key again.

When the "waste basket mode" is active, all tape transport functions except < [26], PLAY [28], and STOP [29] are disabled.

# Mode B (JP4 in position H):

The "waste basket" mode is activated directly by pressing the TAPE DUMP [25] key. The machine stops when this key is pressed again.

# Retraction of a loose tape segment (only possible in TAPE DUMP mode A)

If too much tape has been unwound in "waste basket" mode, it is not necessary to rewind it manually. Simply tension the tape with two fingers of your right hand (preferably gloved) and continually hold down the < [26] key. The left-hand spooling motor [2] rotates and slowly takes up the loose tape. This process can be stopped by releasing the < key.

The motor torque is limited and controlled in such

The motor torque is limited and controlled in such a way that the tape can be easily decelerated by hand. As soon as the tape is released, the motor continuous to run only very slowly. The motor speed can be increased by lightly tensioning the tape segment.

In order to wind up a loose tape segment with the right-hand spooling motor [3], the TAPE DUMP mode must be switched off by pressing the TAPE DUMP [25] key; the yellow led is no longer light. The tape can then be wound on the right-hand reel in short pieces by repetitively pressing the PLAY [28], < [26], or > [27] key.

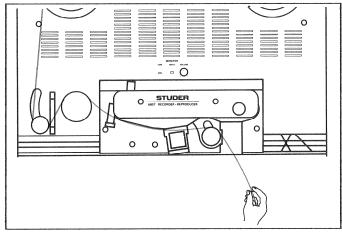


Fig. 2.4.8

# Playing a discarded tape segment

After a long editing session it may happen that many tape sections have been cut and that it is no longer clear as to which piece belongs where and which end of the tape is the beginning or the end. With the A807 tape recorder you can play cut segments without first joining them and winding them on a reel.

#### Procedure:

- Thread the tape according to Fig. 2.4.9 and select the TAPE DUMP [25] function.
- With two fingers of your left hand tension the left-hand tape end in such a way that the tape makes contact with the head.
- In TAPE DUMP mode A start the reproduction by pressing the PLAY [28] key. The PLAY function can be cancelled by pressing the STOP [29] key.

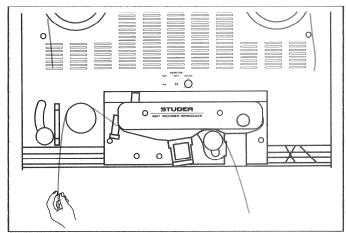


Fig. 2.4.9

# 2.5 PROGRAMMING

The four keys [21], [22], [60] and [61] of the A807 tape recorder can be assigned to different functions by changing jumper settings.

After the round knobs have been removed by pulling them off and the four fixing screws have been unfastened, the cover of the operator panel can be

removed and the jumpers become accessible.

Jumpers JP08...JP15 Jumpers JP00...JP07

Fig. 2.5.1

For the sake of completeness, the functions of all jumpers are listed in the following table. To reassign the functions of keys [21] and [22], only the jumpers JPOO, JPOI, and JPO2 need to be changed; for the keys [60] and [61] the jumpers JPOS, JPO6, and JPO7 have to be changed. The listed jumper positions correspond to the standard settings of an ABO7 2 mm VU versions as shipped ex factory (software release 30/88).

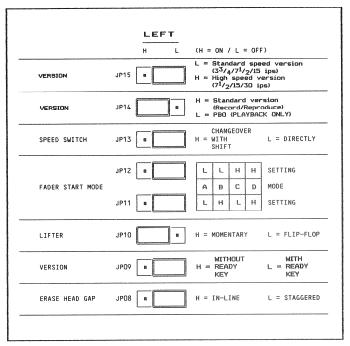


Fig. 2.5.2

All jumper settings will be enabled only when tape recorder is switched off an on again.

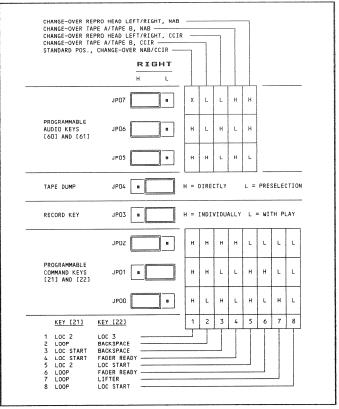


Fig. 2.5.3

#### 2.5.1 Fader start mode

Four different fader start modes can be set with the jumpers JP11 and JP12.

FADER mode:	Α	В	С	D
FADER READY KEY required		8	8	8
FADER READY KEY not required	a			
BUILT-IN MONITOR SPEAKER muted	u	и	9	B
FADER CLOSED: Tape recorder operable Tape recorder not operable	B	Ħ	9	8
FADER OPEN: Tape recorder operable Tape recorder not operable	8	8	8	撤

When one or both audio channels are switched to READY [31/42]:

The tape recorder starts in record mode when the fader is opened, provided the SHIFT [18] key and the built-in FADER READY [22] key have been pressed (the yellow LED next to the key flashes to signal that record has been preselected).

#### Important:

If the machine is put into the so-called safe condition by deselecting the ready function with the READY key [31/42], or if the FADER READY function is reset by pressing [22], the record preselection is also cancelled.

# 2.5.2 Programming the audio parameters

When you press the microswitch adj [11] by means of a pointed tool, the A807 tape recorder is switched to audio alignment mode.

In this mode the display [17] of the tape timer no longer shows the current tape address but information concerning the audio parameters. The three red LEDs to the right of the display indicate which parameter is being displayed (functions identified with lower case letters: lvl, trbl, and bias). In addition the functions of the keys LAP [15], SEL [13], STEP [12], LOC START [21], and BACKSPACE [22] change to the functions specified in yellow lettering below the keys.

LAP = channel
SEL = parameter
STEP = store
LOC START = down
BACKSPACE = up

TAPE DUMP = input (only in models without output signal selector)

In adj mode the machine remains operable so that play and record commands can be entered and different tape speeds can be selected, and for switching over between CCIR/NAB, TAPE A/B, or HEAD A/HEAD B. The tape timer also continues to run internally.

#### Procedure:

A detailed description concerning the alignment of the audio parameters can be found in Section 4 of this manual. Only the method for entering the parameters is described here.

- Switch the machine to the alignment mode by pressing the adj [11] key.
- Select the desired tape speed, equalization standard, tape type or reproduce head by pressing the appropriate keys.
- Select the desired operating mode (REPRO, SYNC or READY+REC).
- Select the audio channel to be calibrated by pressing the channel [15] key.
- Select the parameter to be adjusted by pressing the param [13] key.

lvl = level adjustment
trbl = treble correction
bias = bias adjustment

- With the down [21] and up [22] key you can modify in the desired direction the decimal value and consequently the level selected with param [13].
- When the setting is correct, save the value by pressing the store [12] key.
- Press the adj [11] key again to quit the alignment mode. All modified values that have not been stored yet (identified by a flashing dot) will be lost. The machine continues to operate with the old data.

The display [17] e.g. shows the following information:

A1 .025 LED: 1v1

The letter A in the first position of the display signals the "adj" mode.

The digit in the second position of the display specifies the audio channel: 1 = CH1 (left), 2 = CH2 (right).

The last three digits of the display specify the decimal value of the setting (min. = 000, max = 255).

The dot between the numbers indicates whether or not the value has been stored.

- If the dot is continuously lit, the value has been stored.
- If the dot flashes (\*), the value has been entered but not stored.

The program can be terminated by pressing the adj [11] key again. All values that have not been stored yet (flashing dot) will be lost.

However the newly updated parameter values become effective immediately. Those that have not been stored are only effective for as long as the program is not terminated.

#### Function chart

Function		Key		Indicat.	Comment	
panel	adj.	СН	LED		*flashing dot .continuously lit	
REPRO or SYNC or READY+ RECORD		1	1 v1		stored setting Level at 026 Level at 027 : Max. level Level at 254	
	channel up i up down store channel param up store	1	lvl trbl	A2 *031	Level at 030 Level at 031 .: Level at 122 Level at 121 121 stored indic. level from CH1 treble setting CH1 treble at 123 123 stored	
Area-control of the control of the c	channel down store	2	trbl	A2 .153 A2 *152 A2 .152	1	
ONLY in READY+ RECORD	param up store	2	bias	A2 *090	Bias at 089 Bias at 090 090 stored	
Republication of the control of the	channel down store	1	bias	A1 .112 A1 *111 A1 .111	1	
	adj				Quit program	

# 2.5.3 Programming the soft jumpers

Since the introduction of the software release 40/87, so-called soft jumper functions can be programmed in addition to other function changes. Soft jumpers are software switches that can be changed over in the "adj" mode. The functions 04/05 and 06 are only implemented in

software release 30/88.

# Soft jumper OO = mute time

With the soft jumper OO, the mute time during the STOP-PLAY transition can be individually entered for each of the three tape speeds within the range of 00 ms to 950 ms.

Indication: 00.100 100 ms mute time 00. 250 250 ms mute time

# Soft jumper O1 = baud rate

transmission rate (baud rate) of the serial RS232 interface can be set with the soft jumper O1. Two speeds can be set: 1200 or 9600 baud. Indication: 01. 12 01. 96 baud rate = 1200 baud rate = 9600

# Soft jumper 02 = echo mode

jumper 02 switches the echo mode of the serial RS232 interface on and off.

Indication: 02. 0 no echo mode 02. 1 echo mode en echo mode enabled

# Soft jumper 03 = light barrier

Soft jumper 03 switches the light barrier [8] on and off. When the light barrier is enabled, the machine switches to STOP when the transparent tape section is reached. The tape recorder responds as follows in the various modes:

- In PLAY mode the machine stops immediately when the transparent tape section is detected. If transparent tape is in front of the light barrier when the machine is in STOP mode, the desired tape transport function (e.g. PLAY) must be pressed until the tape with the oxide coating
- covers the light barrier.

  In spooling mode (< or >) the tape recorder stops immediately when the transparent tape is reached. If the spooling key is continuously pressed, the transparent tape section will be skipped.
- In fader start mode the tape recorder also stops when the transparent tape is detected. If the transparent tape is in front of the light barrier when the fader is closed, the tape recorder starts in play mode when the fader is opened, and stops when the next transparent tape section is reached.
- Transparent tape sections are ignored in all LOCATE functions (Z-LOC, LOC1, etc.). The tape is positioned directly at the target address.
- Transparent tape sections are ignored in waste basket mode (TAPE DUMP).

Indication: 03. 0 Light barrier disabled 03. 1 Light barrier enabled

# Soft jumper 04 = mono/stereo changeover

Soft jumper 04 controls the mono/stereo changeover as a function of the selected tape speed (only active when MONO/STEREO switch is installed). When the changeover is enabled, the MONO priority is automatically activated when the machine is switched to either 3.75 or 7.5 ips. STEREO mode is automatically selected when the machine is started with 15 ips or

The selected status can always be changed by pressing the SHIFT [18] and MONO [55] keys. Sneed-dependent M/S.

Indication: 04. 0 priority setting disabled

> 04. 1 Speed-dependent M/S, priority setting enabled

Soft jumper 05 = timer stop for TAPE DUMP

With the soft jumper O5 a timer stop can be set in TAPE DUMP mode. In this case the content of the tape timer is frozen when the TAPE DUMP [25] is selected. It is not updated as long as the "waste basket" mode is active. As soon as this mode is terminated, the tape timer continues to run from the frozen reading.

Indication: 05. 0 05. 1 timer stop disabled timer stop enabled

Soft jumper O6 = retracting the pinch roller

With the soft jumper O6 the pinch roller [70] can be retracted to the idle position when an "out-oftape" condition is detected. An out-of-tape condition is recognized when there is no tape tension (tape tension sensor [9] in the idle position) and if no tape is detected by the light barrier [8] (both conditions exist e.g. during tape editina).

When the STOP [29] function is initiated or when the tape is edited with TAPE DUMP [25], the pinch roller stays in the cueing position.

06. 0 retraction disabled 06. 1 retraction enabled Indication:

#### 2.5.4 Selecting the soft jumper program

In order to activate the soft jumper program, the SHIFT [18] key must be held down while the adj [11] button is pressed with a pointed tool. The display [17] indicates e.g.:

# 00.150

The first two numbers of the display specify the number of the soft jumper (in our example: 00 = mute time).

The following number(s) specify the status of the selected soft jumper (in our example: 150 ms mute time).

The dot between the numbers indicates whether or not the setting is stored:

- Dot continuously lit () = value stored
- Flashing dot (\*) = value set but not stored yet. The keys with the yellow lettering on the operator panel change their functions as follows:
- Channel [15]. The soft jumpers are selected with this key. Each time this key is pressed the next soft jumper is selected (00 ... 01 ... 02 ... 03 ... etc. After the last jumper it wraps around to jumper 00).
- The up [22] and down [21] keys change the status of the soft jumper (150 ms ... 200 ms ... 250 ms ... 200 ms).
- The store [12] key saves the current jumper setting in memory.

The soft jumper program can be terminated by pressing the adj [11] key again. All settings that have not been stored yet (flashing dot) will be lost. However the newly updated soft jumper settings become effective immediately. Those that have not been stored are only effective for as long as the program is not terminated.

# Funktion chart

Function	Key	Indic.	Comment			
Program	SHIFT & adj	00. 150	Program call			
Mute time:	up up : up down store	00* 200 00* 250 : : : : : : : : : : : : : : : : : : :	Mute time 200 ms Mute time 250 ms  . Mute time 950 ms Mute time 900 ms 900 ms stored			
	other speed: up store	00. 050 00* 100 00. 100	Mute time 50 ms Mute time 100 ms for other speed stored			
Baud rate:	channel down up	01. 96 01* 12 01. 96	Baud rate 9600 Baud rate 1200 9600 Baud already stored!			
Echo mode:	channel up store	02. 0 02* 1 02. 1	No echo mode Echo mode Echo mode stored			
Light barrier:	channel up store	03. 0 03* 1 03. 1	Enabled Disabled Enabled is sto- red			
"X MONO/ STEREO CHANGE OVER:	channel up: : : etc.	04. 0 04* 1 : : etc.	enabled Disabled : : etc.			

Can only be called up, if the equipment is accordinly equiped.

#### SERIAL INTERFACE RS232

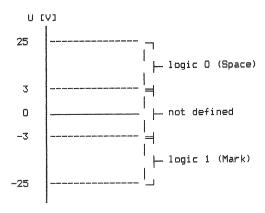
The STUDER A807 tape recorder is equipped with a serial interface (RS232) for operation with a terminal, a computer, or for remote control of the tape deck functions.

# 2.6.1 RS 232 Standard interface

The term "RS232" defines a connection between a "terminal" (computer) and a "modem" (A807) for the purpose of exchanging data. In addition this standard defines the:

- Electrical characteristics (level, lines)
- Mechanical characteristics (connector)
- Signal descriptions
- Standard connections.

The interface can operate with a data rate of up to 19.2 k baud (On the A807/A810/A812/A820 up to 9.6 k baud) and cable lengths of up to 15 m. The signal levels are defined as follows



The 25-pin connector defined in this standard supports various interface structures. The full pin assignment is rarely used nowadays. Modern systems frequently use a minimal structure according to Fig. 2.5.4 for the terminal-modem or terminal-terminal connection and consequently need only a smaller 9pin connector.

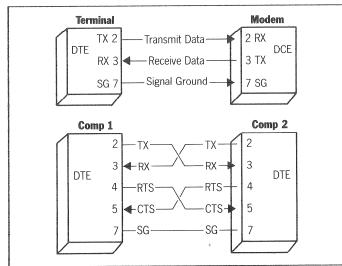


Fig. 2.5.4

All parameters (e.g. baud rate, code, synchronous/asynchronous connections, number of start/stop bits, parity, hardware/software handshake) are defined by the manufacturer.

# 2.6.2 RS 232 Interface of the A807

A 9-pin connector is used for the serial interface of the A807 tape recorder. With a correspondingly prepared adapter cable it is possible to define whether a unit should function as a terminal or a modem.

Recor 9-p		r Terminal 25-pin		Modem 25-pin	
Signal	Pin no.	Signal	Pin no.	Signal	Pin no.
SNDATA	2	Trans. Data	2	Trans. Data	3
RCVDATA	8	Rec. Data	3	Rec. Data	2
GROUND	9	Signal- Ground	7	Signal- Ground	7

No additional handshake lines are used. A software handshake (X ON / X OFF protocol) is implemented for all transmission rates, however it is only required for 9.6 k baud.

X ON = 0001 0001 (ASCII: DC1) = resume

X OFF = 0001 0011 (ASCII: DC3) = interrupt

Upon receipt of an X OFF, the tape recorder still transmits up to 2 characters. After the tape recorder itself has transmitted X OFF, it can still receive five characters without losing a command.

Fixed settings:

- 1 start bit
- 1 stop bit
- 8 data bits No parity bit

The baud rate can be set with the aid of soft jumper 01 (1200 or 9600 baud). Only ASCII characters are admissible as data!

# 2.6.3 Working with the serial interface

The computer or the terminal are to be connected to the tape recorder by means of an adapter cable fitted with a 9-pin socket.

The computer or the terminal must be set as follows:

1 start bit, 8 data bits, 1 stop bit, no parity bit, no echo mode, baud rate 1200 or 9600 baud. The handshake lines CTS and RTS are to be connected to "I OH"

After a RESET of the tape recorder (switching the tape recorder off and on again), the following message is displayed on the screen: A807

The desired commands can now be entered via the terminal keyboard according to the table below. Most commands are not executed until the ENTER or LINE FEED key is pressed.

# Command list:

Tape deck commands				
Command (_ =blank, / = CR, * = blank or CR)	Response of the A807	Explanation		
STP* RWD* FWD* PLY* REC*	<pre><cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> </lf></cr> </lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></pre>	Stop Rewind Fast forward Play Record (directly without PLAY)		
SSA* mi SSB* mi SSC* mi SSD* mi	<cr><lf> <cr><lf> <cr><lf> <cr><lf></lf></cr></lf></cr></lf></cr></lf></cr>	3,75 ips (9,5 cm/s) 7,5 ips (19 cm/s) 15 ips (38 cm/s) 30 ips (76 cm/s)		
NS?*	X <cr><lf> X = 1 Byte HEX X = 00 X = 01 X = 02 X = 03</lf></cr>	Inquiry of nom. speed where: 9,5 cm/s (3.75 ips) 19 cm/s (7.5 ips) 38 cm/s (15 ips) 76 cm/s (30 ips)		
VEN* VEF*	<cr><lf> <cr><lf></lf></cr></lf></cr>	Varispeed external on Varispeed ext. off		
FEF* #2	<cr><lf></lf></cr>	FADER START ENABLE on FADER START ENABLE off		
EDT*	<cr><lf></lf></cr>	Lifter disabeld during spooling		
LFT*	<cr><lf></lf></cr>	Lifter enabled during spooling		
LOC_ <hh:mm:ss></hh:mm:ss>	<cr><lf></lf></cr>	Positioning at the ti- mer reading hh:mm:ss e.g.: LOC_01:20:15 or : LOC1_03_22		
LMV_ <xxxxxx></xxxxxx>	<cr><lf></lf></cr>	Positioning at the number of tacho-roller pulses <xxxxxxx 3="" =="" byte="" e.g.:="" hex="" lmv_ooae4f<="" td=""></xxxxxxx>		
MV?*	XXXXXXCR> <lf> 3 Byte HEX</lf>	Read out the number of tacho roller pulses		
STM_ <hh:mm:ss></hh:mm:ss>	<cr><lf></lf></cr>	Set timer to hh:mm:ss e.g.: STM0:43:57 or : STM_00_55_12		
TM?*	hh:mm:55,xx <cr><lf> xx = xx/256 s</lf></cr>	Read out timer content		

Tape deck commands (continuation)					
Command (_ =blank, / = CR, * = Blank or CR)	Response of A807	Explanation			
ST?#	X <cr><lf> X = 1 Byte HEX X = 81 X = 01  X = 82 X = 02 X = 02 X = 03 X = 84 X = 04  X = 85 X = 05 X = 86 X = 07 X = 80 X = 007 X = 00</lf></cr>	Tape deck status where: Tape out position Tape mounted, no tension STOP,tape tension yes STOP not achieved Rewind achieved Rewind not achieved Fast forward achieved Fast forward not achieved PLAY achieved PLAY achieved Varispeed Record achieved Record not achieved Reverse play achieved Reverse play not achieved TAPE DUMP selected TAPE DUMP active SHUTTLE acitve SHUTTLE not achieved Positioning at LOC			
DST* m <sup>3</sup>	<pre><cr><lf>&lt;_hh:mm :ss,xx_Y&gt; xx = xx/256 s Y = Status 1 Byte HEX</lf></cr></pre>	Continuous indication of the tape deck status with counter reading and status			
LCD*	<cr><lf> <cr><lf></lf></cr></lf></cr>	Local keypad off Local keypad on			
SD?*	00.WW.YY WW = Woche YY = Jahr	Inquiry of soft- ware release date			

# Notes:

- Only possible if speed changeover is not interlocked with the SHIFT [15] key by means of jumper JP13 (below the front cover).
- 00 Only feasible in FADER START MODE B, C, or D
- $^{\rm 3}$  Terminate continuous status indication with Control X.

Audio commands				
Command (_ =blank, / = CR, * = blank oder CR)	Response of the A807	Explanation		
SNB* SCR*	<cr><lf> <cr><lf></lf></cr></lf></cr>	Select NAB Select CCIR		
REA_i * SAF_i *	<cr><lf> <cr><lf></lf></cr></lf></cr>	channel i to READY Cancel READY of channel i		
INP_i* SYN_i* REP_i* MTN_i*	<cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf> <cr><lf></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr></lf></cr>	Set channel i to INPUT Set channel i to SYNC Set channel i to REPRO Set channel i to MUTE Cancel MUTE of channel i     i = 1, 2 or F     i = channel i     2 = channel 2     F = both channel		
ION*	<cr><lf></lf></cr>	Switch on INSERT (MONO)		
IOF*	<cr><lf></lf></cr>	Switch off INSERT (STEREO)		
AP?_i,j*	XX <cr><lf> XX=1 Byte HEX</lf></cr>	Inquire audio parameter i = channel 1 or 2 j = D/A converter O = Level REPRO/SYNC 1 = Treble REPRO/SYNC 4 = Level RECORD 5 = Treble RECORD 6 = Bias		
PAP_i,j,xx* xx = 1 Byte HEX	<cr><lf></lf></cr>	Set audio parameters without storing i = channel 1 or 2 j = D/A converter 0 = Level REPRO/SYNC 1 = Treble REPRO/SYNC 4 = Level RECORD 5 = Treble RECORD 6 = Bias		
SAP_i,j,xx* xx = 1 Byte HEX	<cr><lf></lf></cr>	Set audio parameters and store i = channel 1 or 2 j = D/A converter 0 = Level REPRO/SYNC 1 = Treble REPRO/SYNC 4 = Level RECORD 5 = Treble RECORD 6 = Bias		

THE ABOVE LIST COMMANDS MAY NOT NECESSARILY BE COMPLETE. IT WILL BE UPDATED OR EXTENDED AS REQUIRED.

#### 2.7 CARE INSTRUCTIONS

Daily care is limited to cleaning the soundheads, the capstan shaft, and all elements that come in contact with the tape.

Dust and oxide particles of the magnetic coating accumulate principally on soundheads and the tape guidance elements. This can lead to drop outs.

Cleaning should, therefore, be performed daily, or if contamination is visible, even more frequently.

For proper care of the tape recorder we recommend the STUDER CLEANING KIT (part No. 10.496.010.00). It contains everything required for cleaning a tape recorder:

- Head cleaner
- Aluminite cleaner
- Felt sticks
- Cleaning rag

#### Procedure:

Moisten a felt stick or the cleaning rag with a small amount of head cleaner and clean the soundheads and all elements that come in contact with the tape. Use a second felt stick or a dry section of the cleaning rag to wipe the cleaned parts dry.

Normally, the capstan shaft does not rotate when the recorder is not switched to play mode. For cleaning purposes a special function has been provided: When the magnetic tape is unthreaded (tape tension sensor in idle position, light barrier not covered), the capstan shaft continues to rotate for as long as the PLAY [28] key is pressed.

For cleaning aluminum surfaces use the special aluminite cleaner. It removes the dirt and restores the metallic lustre of the aluminum.

# Cautions

Make sure that neither head cleaner nor aluminite cleaner penetrates into the bearing of the capstan

The acrylic panels of the VU-meters are not resistant to solvents!

# Lubricating the capstan bearing:

The capstan motor and its sintered-sleeve bearing are virtually maintenance-free. To replenish the oil or grease in the bearing, oil lubricated sintered-sleeve capstan bearings should be re-oiled semiannually, and grease lubricated sintered-sleeve capstan bearings should be re-greased annually or after a prolonged idle period.

Particularly in the case of oil lubricated sinteredsleeve bearings, the oil can eventually escape through the bearing gap when the shaft is aligned vertically.

For relubrication use only the recommended lubricants!

For <u>oil lubricated</u> capstan motors the synthetic oil ISOFLEX PDB 65 (Part No. 20.020.401.04) should be used.

For <u>grease lubricated</u> capstan motors (in production since 1.1.1988, identified with a <u>red label</u>), only the liquid grease CONSTANT 6LY 2100 (Part No. 20.020.401.10) should be used.

#### **Procedures**

On oil lubricated capstan motors lift off the upper plastic bearing cap and apply a few drops of oil to the felt.

On grease lubricated capstan motors (red label) lift off the upper plastic bearing cap and apply a few drops of liquid grease into the bearing gap (between the capstan shaft and the bearing).

#### Note:

The bearing seat of capstan shafts is ground to the internal diameter of the pressed-in sinteredsleeve bearing within very close tolerances. For this reason it is impossible to replace the capstan shaft in the field if any service is needed. Capstan motors should always be shipped to the national STUDER dealer for overhaul.

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# TAPE DECK ELECTRONICS

#### 3.1 CIRCUIT DESCRIPTION

Note: A summary of all electronic assemblies is given in the following Section 3.1.1, "Introduction". The assemblies are described individually in the Section 3.1.2 and following. A description of the AUDIO CONTROL and AUDIO ELECTRONICS assemblies can be found in Section 4.

#### 3.1.1 Introduction

The entire electronics can be subdivided into function blocks (refer to block diagram):

- Power supply unit comprising the power transformer, rectifier, filtering (GR 2..6), and stabilization (part of GR 10).
- TAPE DECK ELECTRONICS (GR 10) which is the heart of the machine; it supplies control commands to all other assemblies.
- SPOOLING MOTOR CONTROL, GR 11.
- CAPSTAN MOTOR CONTROL, GR 20.
- COMMAND PANEL, GR 3Ø.
- Audio assemblies (refer to Section 4.1).

In addition there is a number of peripheral devices such as sensors, remote control interfaces, and feedback which are described in conjunction with the assemblies in which they are incorporated.

# 3.1.2 Power supply

The power supply is connected via an IEC connector with built-in primary fuse and an RF rejection filter to a voltage selector with which the line voltage can be set within the range of 100...140 V and 200...240 V.

Five electrically isolated secondary windings are connected individually via secondary fuses to the rectifiers and filtered. The smoothing is so efficient that power interruptions of up to approx. 100 ms duration do not adversely affect the operation. Each secondary voltage is produced individually; only the +60 V is cascaded from +20 V and +40 V.

The stabilized phantom supply for the microphone socket is derived from the +60 V. It normally is 48 V but it can also be changed to 24 V or 12 V by changing the resistors R23, R25, and R30 (refer to circuit diagram). The circuit is current limited; if due to excessive current the voltage drop across R 18 is larger than on D8 (D 9 is required for compensating the voltage drop across the basis/emitter link of Q8), Q8 blocks and consequently also Q9.

From the same non-attenuated voltage also the 25 V for controlling the EEPROMs is derived. The voltage reference is implemented with the Zener diodes D5 and D6.

The operating voltage for the logic is derived from a non-attenuated voltage of 24 V by a switching regulator (IC1) whose pulse duty factor is controlled as a function of the load. This switching regulator is clocked by the 76 kHz equipment clock (from IC 11/6). The filter circuit comprising L1 and C 5..7 are used for smoothing the output voltage. Because the TTL circuit is very sensitive to surge voltages, a crowbar circuit (Q2) has been provided which is triggered by D2 in the event of a voltage surge.

The operating voltage of  $\pm$  15 V is produced via normal three-step regulators (IC2 and 3).

The logical PWRON, signal derived from Q1, is of particular importance because 40 ms after a power failure it initiates a data protection routine via the switching regulator, i.e. at a time when the logic still functions correctly. Certain equipment states such as the tape speed and the selected equalization are saved in the EEPROMS so that this information is available when power returns. Other functions, particularly RECORD and READY are not saved but are set to the default setting after power is restored. Example: If the machine was in record mode, STOP mode is activated after the power is switched on again.

# 3.1.3 Control (TAPE DECK ELECTRONICS, GR

For the block diagram of this section please refer to page 6/4.

The CPU is a microprocessor type 6803 (IC12) that is clocked with a frequency of 4.9 MHz. It processes the various inputs and outputs corresponding commands to the connected assemblies.

The resident microprocessor program is stored in two EPROMs (IC14 and 15); a RAM chip (IC16) with a capacity of 2 x 8k is used for working storage. Data and parameters that should automatically be reestablished after power is switched on again are saved in EEPROM IC10 each time the power is switched off (refer to table).

Input signals are supplied by the following assemblies:

a.) MOVE SENSOR GR 24. The sensor signals are produced on the Move Sensor board; the light produced by the LEDs DLQ1 and 2 is switched off rhythmically by a rotating disc with rectangular serrations. The disc is driven by a tape guide roller which means that the frequency of the move sensor signal is a measure of the tape speed. The tape move direction can also be determined from the overlapping of the signals. The receiving photo transistors control Q1 or Q2 respectively; when they are through-connected, the current through the diode is increased by R3 or R7 respectively, causing the square-wave signal to become steeper.

The final signal shape is produced by the Schmitt trigger stages IC5 when they are input to the tape deck electronics board.

b.) SPOOLING MOTOR TACHO GR 17...18. Each spooling motor has its own tacho whose circuit corresponds largely to the one of the move sensor. Since the signal frequency is proportional to the spooling motor speed, the pancake diameter can be measured by comparing the signals from the spooling motor tacho and the move sensor.

The tacho signals 1 M1-TACHO and M2-TACHO are taken to IC8 and IC9. The tacho signal 2 is divided by 16 in IC9: in spooling mode the CPU can thus determine whether it wants to track the individual tacho signals (input P13) or the divided signal (input P12).

- c.) Operator entries from the control panel are buffered in coded form in register IC 27 (see 3.1.6).
- d.) The M3-SYNC signal (input P11) indicates that the capstan motor has synchronized to its control frequency.
- e.) Commands can also originate from outside the machine:
- From the remote control (PARALLEL REMOTE CONTROL) or the SYNCHRONIZER PARALLEL PORT with buffer in registers IC29 and 30.
- From the connected bidirectional RS 232 interface.

Commands are output via the registers IC 25, 26, 28 and 31 as well as the RS 232 interface and the SYNCHRONIZER PARALLEL PORT. IC 18 functions as an address decoder for the ports in both directions.

Unconventional is the control of the take-up spooling motor. Normally the tape tensions are controlled on both sides by means of tape tension sensors or similar devices. However, there is no such sensor on the right-hand side of the STUDER ABØ7; for this reason the control information for the right-hand motor must be obtained in a different way. The CPU knows the speed of the tape (move sensor) and the rotational frequency of the take-up motor (tacho 2). From these values it computes the required tape tension which is output to the spooling motor control via the D/A converter IC24.

From the move sensor information the CPU also knows the spooling speed and limits it to approx. 10 m/sec.

# 3.1.4 TAPE TENSION SENSOR BOARD 1.727.320. (GR13)

The tape tension sensor is equipped with an oscillator that oscillates with a frequency of approx. 833 kHz. The coupling of this signal from L1 to L2 is more or less damped by a shaped part mounted on the tape tension sensor so that a DC voltage proportional to the tape tension is obtained on C3 after rectification by D2. Through summation in C2 with the reference voltage for full tape tension sensor deflection set with R16, and subsequent inversion, the following voltage should be available on TP1 if the alignment is correct:

+4 V in the absence of any tape tension Ø V for maximum tape tension

The gain of IC2 is adjusted with R11.

### 3.1.5 SPOOLING MOTOR CONTROL 1.727.340.XX

For the block diagram of this section please refer to page 6/25.

The principle is as follows:

The tape tension sensor controls the unwinding motor. From the ratio of the tape move speed (move sensor pulse) and the rotational frequency of the take-up motor the microprocessor computes the control voltage for the take-up motor.

The allocation of the control voltage to the corresponding motor is

achieved with the commutation IC7.

The output voltage of the TAPE TENSION SENSOR BOARD (AN-TTENS) is taken via pin 4 of connector J2 to the spooling motor control 1.727.340.XX. IC1/2 adds the tape tension reference value selected by IC2 to the ACTUAL tape tension value. The following reference values can be connected in accordance with the tape deck function:

- Reference value for PLAY tape tension
- Reference value for fast forward (FORW) tape tension
- Reference value for fast rewind (REW) tape tension
- Reference value for library wind speed (LIBR)

These four references are selected by means of the two signals MS-REFA and MS-REFB from register IC25 of the TAPE DECK ELECTRONICS BOARD 1.727.350.XX.

The aggregate signal of IC1/2 is now taken to the input of IC1/1 which normally functions as a buffer. Via the FET Q4 the control voltage is taken to the previously mentioned commutation IC7 which in fast forward mode supplies the tape tension sensor signals to the summation IC11/2. This IC functions as an inverter, except in shuttle mode. The (M1-CTL) signal can be measured on test point 4 and is taken via the comparator IC13/2 to the positive input of the pulse width modulator IC14/2.

The negative input of IC14/2 receives a saw tooth voltage of 76 kHz which is produced from the 76 kHz microprocessor clock (MS-C76k). This square—wave signal is converted by C12 to needle pulses. The wiring of the current source Q9 ensures that the capacitor C21 is charged to operating voltage. With each needle pulse, transistor Q8 becomes conductive, causing the capacitor C21 to be discharged and recharged. The result is a saw tooth voltage that is available on the negative inputs of the pulse width modulators IC14/1 and IC14/2. The pulse duration on the output of the pulse width modulator IC14/2 is determined by the deflection of the tape tension sensor, i.e. the magnitude of the DC voltage. The higher the DC voltage the larger the pulse width on the output.

The pulse width modulated signal connects the small-signal transistor Q12, and the power transistors Q6 and Q7 connect the operating voltage for the spooling motors (+5 $\emptyset$  V) in the 76 kHz rhythm. The L/C element integrates the signal so that the required power for the spooling motor is available in the U-M1 signal.

The voltage for the other motor is supplied in a similar way, except that the DC voltage does not originate from the tape tension sensor but from the microprocessor (refer to block diagram).

The DC voltage M2-REFAN, computed by microcomputer from the ratio of the rotational speeds of the tape move sensor and the take-up motor is taken via pin 14 of connector J3 to the potentiometer R35 so that the maximum control voltage (10 V on TP5) can be set.

Via the amplifier IC5/1 and the commutation IC7 the signal is applied to the negative input of the summation amplifier IC11/1. The M2-CTL signal is taken via the comparator IC13/1 to the pulse width modulator IC14/1 and connects the operating voltage +50 V via the transistors Q13, Q10, and Q11. The U-M2 voltage filtered by the storage choke L2 and by C25 is now taken to the corresponding spooling motor.

The three phases R, S, and T of the two 3-phase asynchronous spooling motors are controlled via the complementary power transistors BWD47 and BDW42.

For the left-hand motor M1 the transistors Q15, Q19 or Q23 connect one of the three phases to the positive voltage, and a second phase is connected to Ø Volt by one of the three transistors Q17, Q21, or Q25.

The PROM IC15 (IC18) ensures that the transistors switch in the correct sequence so that always one phase of the spooling motor is connected to the positive voltage, while the second phase is connected to Ø Volt. The third phase remains de-energized. Through the correct sequential commutation of the individual phases by means of the PROM, a rotary field is produced that puts the motor into motion.

The sense of rotation of the spooling motor is determined by the two signals M1-DIR and M2-DIR. The following rules apply:

- With a high signal the motor rotates in the take-up direction
- With a low signal the motor rotates in the supply direction.

The speed with which the individual phases are changed over determines the rotational frequency of the take-up motor.

The square—wave signal M1-TSENS of the left—hand spooling motor on pin 4 of connector J5 of the SPOOLING MOTOR TACHO LEFT 1.727.315 board and the square—wave signal M2TSENS of the right—hand spooling motor on pin 4 of connector J5 of the SPOOLING MOTOR TACHO RIGHT 1.727.316 board are taken via a Schmitt trigger IC4 to the commutation IC8 which connects the signal of the take—up motor to the mono flop IC6, depending on the tape move direction. For each incoming control edge this mono flop supplied a pulse of constant width.

After the integrator C9/1 a DC voltage (FRQ-CTL) is produced that controls the VCO IC17 (voltage controlled oscillator). On output 3 a frequency depending on the input voltage of the VCO is produced that is subsequently divided by the frequency divider IC16 and which is used by the two PROMs as the clock for controlling the individual motor phases.

The following rule applies:

The higher the speed of the take-up motor the larger the number of constant-width pulses that appear on the output of IC6. This results in a smaller DC voltage after the integrator which in turn leads to a higher control frequency of the spooling motor that ranges from 35 to 70 Hz.

The result is that the commutation frequency of the spooling motors is adjusted so that an even higher speed is achieved.

In play mode the MS-PRESS signal disables the mono flop via the inputs 3/13. The resulting DC voltage GRQ-CTL is 12 V which corresponds to a motor frequency of 35 Hz.

To prevent "singing" of the motor due to fast commutation of the phases, the spooling motor control has been equipped with the SPOOLING MOTOR FILTER 1.727.342 board.

Each phase R, S, T is allocated a 47  $\mu F$  capacitor that is connected to Ø Volt. In play mode the MS-PRESS signal, which after the inverter IC4 is called C-MOTFLT, connects a 100  $\mu F$  parallel capacitor (C1, 3, 5 as well as C 7, 9, 12) via the transistor Q7 by means of the transistors Q1 to Q6 so that the individual phases are loaded with 147  $\mu F$ .

In rewind mode the MS-REW signal trips the commutation IC7. The tape tension sensor is now allocated to the right-hand (supply) motor, and the reference voltage from the MPU is allocated to the left-hand (take-up) motor.

The following functions are responsible for smooth changeover of the tape deck functions without creating tape loops:

- The comparator IC3/1 checks the position of the tape tension sensor and via transistor Q3 supplies the tape end signal (S-TAPOUT) when the tape tension sensor returns to the neutral position. (comparison with 3.7 V reference). At the same time the FET Q4 interrupts the control signal to the supplying motor.
- However, if the tape tension becomes too high (tape tension sensor fully deflected, i.e. the voltage on pin 5 of IC5/2 is lower than Ø V), the comparator IC5/2 short circuits the control voltage of the MPU via the FET Q5.
- To prevent excessive tape tensions, particularly when the tape is accelerated, a starting aid is activated:

In order to keep the output of IC1/1 always positive, this IC functions as a buffer (non-inverting amplifier when Q1 is high impedance), but it can also operate as an inverter (controlled by voltage level) when Q1 is conductive.

This changeover occurs when the tape tension is so high that the output voltage of IC1/2 changes to zero and the MS-DIR signal is high. In this case the sense of rotation of the supply motor is reversed via the capstan direction dependent commutator IC7. This means that during the brief start-up phase the supplying motor pushes the tape rather than back tensioning it which results in greater acceleration (start kick).

The MS-SHUTL signal activates the shuttle mode via the switch IC8. This switch connects the R-SHUTL2 voltage, tapped on the shuttle potentiometer, to the comparator IC10/2. If the output voltage on IC10/2 is zero, the tape tensions are the same as

in play mode. The tape does not move.

If the shuttle voltage on test point TP6 is positive, the right-hand motor is controlled with the M2-CTL voltage via the summing amplifier IC11/1, i.e. the tape moves to the right. If the shuttle voltage is negative, IC11/2 controls the left-hand motor via the M1-L voltage so that the tape is transported to the left.

The TTA-SHT potentiometer can be aligned to prevent the tape from standing still in the neutral position of the shuttle wheel.

A negative feedback circuit ensures that the spooling speed in shuttle mode is limited and kept constant. The pulses of the move sensor MS-MVCLK are taken from pin 12 to the mono flop (IC6) which in turn supplies constant width pulse that is integrated by C12 and IC9/2. The tape direction dependent MS-MVDIR signal connects the integrated signal either directly by means of IC8 or via the inverter IC10/1 and is thus added to the shuttle voltage.

### 3.1.6 CAPSTAN MOTOR CONTROL 1.727.330. (GRP 2Ø)

For the block diagram of this section please refer to page 6/39.

The capstan motor is equipped with a capacitative tacho ring which is connected to pins 1 and 2 of the connector J3/EL3.

IC1 is an FM demodulator IC which is supplied by a 5.5 MHz oscillator (circuit with Q1). The frequency can be aligned with L2. Pins 5 and 6 are connected to the demodulator circuit that comprises coil L1 and the capacitative tacho ring. When the capstan motor rotates, the mid frequency of the demodulator circuit changes in the rhythm of the rotation. This frequency is available on the AF output signal 8 as a sine-shaped signal that is amplified by IC3/2. The output signal can be by L1 aligned to maximum amplitude on test point TP 2.

The frequency on test point TP 2 depends on the selected tape speed and in synchronous operation is:

- 300 Hz at 3 3/4 ips 600 Hz at 7½ ips
- 88
- 1200 Hz at 15 ips
- 2400 Hz at 30 ips

IC3/1 is wired as a Schmitt trigger and IC4/1 as an amplifier. When the tape speed is 3 3/4 ips the square-wave signal is taken directly to the output 13 of the analog switch IC14.

At the other three tape speeds the square-wave voltage is divided in the frequency divider IC13, and the switching IC14 selects the dividing ratio as a function of the speed in such a way that 300 Hz are always available at the output 13 when synchronism is achieved.

The correct dividing ratio is selected by IC12 which actuates the changeover switch by decoding the data line via the transistors Q16, Q17. The logic table above the switch contains information on the two control bits and the corresponding switch settina.

IC17 is a data register which is controlled via a serial data input (M3-DATA), a clock signal (M3-CLK), and a strobe signal (M3-EN). These control signals are converted from serial to parallel in the IC and buffered.

Since the original square-wave signals are available on the output 13 of IC14 only at 3 3/4 ips tape speed, R20 must be aligned to a symmetrical pulse/pause ratio (wow and flutter).

The tacho signal is now taken to the frequency-tovoltage converter. IC18 is a monoflop that is controlled with both signal edges so that the frequency is doubled. A pulse of approx. 16 µs is available on output 6 and a pulse of approx. 42 µs on output 9 which controls a sample/hold circuit.

- The longer pulse charges the capacitor C47 via the transistor Q22.
- The shorter pulse closes the analog switch IC19/4 which transfers the current charge voltage of C47 to the hold capacitor C44. This capacitor retains its charge until the next sample is loaded to the hold capacitor via switch 19/4.

The sampled DC voltage is subsequently taken to the inverting input of the comparator IC16/1 which compares the ACTUAL tacho signal value with the reference.

The reference frequency can be either the MPU clock frequency M3-9600 divided down to 9600 Hz, or the output frequency M3-REFEX of an external varispeed remote control, or an internal varispeed frequency. The latter is generated in the VCO (voltage controlled oscillator) IC6 from the DC voltage tapped on the varispeed potentiometer RE1.

At 3 3/4 ips the transistor Q34 connected by the commutator IC14 limits the lower varispeed range to approx. minus 1.5 semitones (approx. 8%) at the summing input of 2/2.

The analog switch IC8 select the reference signal (9600 Hz for nominal speed) via the transistor  $\Box$ 2 on the frequency divider IC10 which divides the frequency by 16. As a result, the reference signal and the tacho signal after the mono flops ICii and IC18 have the same frequency, i.e. 600 Hz for nominal speed.

The reference signal is now taken via the frequency-to-voltage converter Q3 and IC19/2 comprising the charging capacitor C35 and the holding capacitor C36 to the positive input of the comparator IC16/1.

When synchronism is achieved the sampled DC voltages on the outputs of IC17/1 (TP-9) and IC15/2 are approx. 7 V. When the tacho voltage and reference voltage are approximately within 5% of each other after the start or a speed changeover, the comparator IC22/1 responds and outputs a synchronism sional.

During the capstan start phase or extreme speed changes, control is principally performed by the frequency-to-voltage converter by comparing the reference frequency and the tacho frequency.

The phase comparison of the two frequencies compensates minor fluctuations in synchronous operation.

The phase comparison circuit consists of an integrator IC15/1 that is cyclically short-circuited by the reference signal via IC19/3. This results in a saw tooth signal. This circuit is followed by a differentiating element IC19/1 and C42 which is cyclically enabled by the tacho signal. Similar to the frequency-to-voltage converter this is a sample/hold circuit with C37 serving as the charging capacitor and C42 as the holding capacitor. Refer to the following detail diagram.

The correction signal which is proportional to the phase comparison is now available at the output of IC17/1 and is added to the positive input of the comparator IC16/1. The control voltage resulting from the frequency and phase comparison now passes through a passive integrator IC16/2 and is taken via the summing amplifier IC20/1 to the pulse width modulator IC22/2.

IC21 converts the 76 kHz clock M3-C76k to needle pulses which via the transistor G23 periodically discharge the capacitor C58 that has been charged by the current source C24. A saw tooth voltage is again generated.

The DC voltage from the summing amplifier IC20/1 determines the pulse duty factor which controls the switching regulator (Q25 to Q33) via the input transistor Q31.

The operating voltage (+50.0 V) clocked by the power FETs (Q32 and Q33) is smoothed by the storage choke L3 and C56 and supplied to the capstan motor  $_{\rm M}{\rm T}$ 

The capstan motor is a three-phase synchronous motor that features the same type of control as the spooling motors, i.e. one phase (M3-R, M3-T or M3-S) is connected via the corresponding transistor Q15, Q11 or Q7 respectively to the positive voltage of the switching regulator. A second phase is connected to ground by one of the three transistors Q14, Q10 or Q6 while the third phase remains de-energized.

Three Hall elements built into the motor detect the magnet field of the rotor and signal it via the three amplifiers IC5/1, IC5/2, and IC4/2 to the PROM IC9 which cyclically controls the individual phases as a function of the momentary rotational motor speed. The effect is that the electrical rotating field and the mechanical position of the motor are in harmony which is essential for a synchronous motor.

The PROM read-out direction for reverse play is determined by the M3-DIR signal from the decoder C12

The supply voltage for the three Hall elements is decoupled from the 5 V by the two diodes D1 and

When a capstan motor stop command is initiated, the M3-STOP signal short-circuits the input and the output of IC16/1 with the transistors Q21 and Q18 respectively to ensure that no control voltage is supplied to the pulse width modulator IC22/2. The M3-STOP signal prevents control of the individual motor phases at the input 13 of PROM IC19.

The comparator IC2/1 monitors the supply voltage of the PROM IC9 to prevent simultaneous throughconnection of all three phases. The resistor R130 measures the total current through the motor and supplies this value to the comparator IC20/2. Via IC12 the two signals (current select) connect the maximum admissible starting current through the two transistors Q19, Q20, defined the at outputs 4 and 5 of the microprocessor, to the inverting input 6 of IC20/2.

Both comparators (IC2/1 and IC20/2) add their output currents directly to the control current Uout of the summing amplifier IC20/1.

Circuit changes effective with modification index .22:

To improve the wow-and-flutter performance at 15 ips and 30 ips, the SPEED-B signal increases the gain of IC16/1 by 6 dB via the transistors Q37 (Q2\*) and Q36 (Q3\*).

During the start phase the uncharged capacitor C53 which determines the control voltage causes an interruption. For this reason the transistor G35 (G1%) supplies the starting voltage until the M3-SYNC signal indicates synchronism of the capatan motor with the preset reference frequency. At this point the capacitor C53 has also been charged with the control voltage.

\*The transistor designation in parentheses apply to the capstan PCBs 1.727.330.22 with the supplementary board 1.727.332.00 (Capstan Start CTL Board).

# 3.1.7 Command panel

The command panel (COMMAND PANEL BOARD, 6R 30) processes the operator entries and indicates the states by means of various displays.

The displays are controlled by chips type SAA 1061 which also perform a latching faction. The chip control is implemented with the signals:

- DS-DATA: serial data with a leading 2-bit address
- DS-CLK: clock and
- DS-ENLED: enable function

Up to four SAA 1061 chips can be accessed with the leading 2-bit address; in the maximum system configuration three such chips are used in the tape deck itself and a fourth one in the console penthouse.

The keyboard is arranged as a matrix. In order to prevent continuous scanning of the keyboard by the CPU, the keyboard does not become active until a key has been pressed and consequently a bit of the line byte  $D\emptyset$  ... D7 has changed. At this moment the CPU starts to scan the columns by means of  $G1\emptyset$  through  $G1\delta$  while simultaneously decoding the answer of the line byte. From this information it is possible to determine the exact key that has been pressed.

When the machine is powered on, the columns Q8 and Q9 are activated. As a result all default conditions set with the jumpers  $JP\emptyset$  to JP15 will be scanned.

The VU-meters (if configured) are controlled by the precision rectifiers IC 2/1 and 2/2 as well as IC 6/1 and 6/2 respectively. The three LEDs per channel for indicating peak values at +6 dB, +9 dB, and +12 dB are driven by individual comparators. As is customary for peak indicators, the resetting time of all three LEDs is delayed by C8 (C11).

# 3.2 DISMANTLING THE ASSEMBLIES

#### WARNING:

UNPLUG THE AC POWER CORD BEFORE YOU REMOVE ANY HOUSING PANELS OR BEFORE YOU REMOVE ANY ELECTRICAL ASSEMBLY!

# 3.2.1 Headblock assembly

#### Head cover

 Unfasten two screws [A] (hexagon-socket-screw key size 3)

# Headblock cover

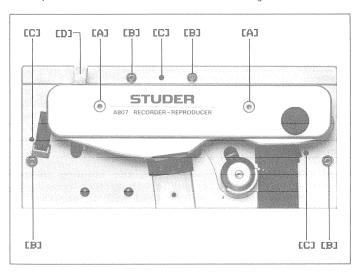
- Remove the head cover. Swing up the hinged headshield in front of the reproduce head.
- Unfasten four screws [B] (hexagon-socket-screw key size 2.5)

#### **Headblock**

It is not necessary to remove the head cover and the headblock cover in order to deinstall the headblock!

IMPORTANT! IN ORDER TO PREVENT INADMISSIBLE MAGNETIZATION OF THE HEADS, THE TAPE RECORDER MUST BE SWITCHED OFF WHEN YOU REMOVE OR INSTALL THE HEADBLOCK.

- Unscrew the pinch roller cover (hexagon-socketscrew key size 2.5).
- Unfasten the three screws (accessible through the holes [C] in the headblock cover) with the aid of a hexagon-socket-screw key size 3. Before removing the headblock check wether the pinch roller is in its rest position; if not, push lever D.
- Carefully lift off the headblock so that the capstan shaft will not become damaged.



#### 3.2.2 COVERS

#### Transport cover

- Remove the guide roller (small guide roller of the tape tension sensor) without any tool. The pinch roller can be removed with a screwdriver size 2.5.
- Remove the headblock cover (or headblock).
- Unfasten seven screws (two of these are accessible through one hole each in the to slicing rails) with the aid of a hexagon-socket-screw key size 2.5.
- Lift off the cover.

# Operating panel

- Turn the knobs (1 to 7, depending on recorder model) to the clockwise limit position and pull them off.
- Unfasten 4 screws (hexagon-socket-screw key size 2.5)
- Lift off the panel

### Monitor panel

 Unfasten 2 screws (hexagon-socket-screw key size 2.5)

#### Rear panel

- Set the recorder in upright position.
- Unfasten seven screws (hexagon-socket-screw key size 2.5)
- When you reinstall the rear panel make sure that the position of the two serrated lock washers is correct: on the left and right-hand side in the middle.

# End panel/power supply cover

- Turn the recorder in upright position.
- Remove the rear panel
- Unfasten the mounting screws of the slide switch PHANTOM POWERING (if this option is installed) with the aid of a hexagon-socket-screw key size 2.
- Unfasten the screening plate below the MIC INPUT sockets (this plate is fastened with the same screws on the PHANTOM POWERING switch).
- Unfasten the XLR <u>input sockets</u> (MIC and LINE INPUT).
  - One screw each is accessible through a fourth hole in the socket (without contact); approximately one 90° counterclockwise turn (screwdriver size 00) is required. Carefully push the inserts inward.
- Power inlet: Disconnect the stranded wire of the protecting ground (yellow/green) as well as the two stranded wires (brown and blue, in grey plastic tube) from the power inlet.
- Unfasten eight screws (hexagon-socket-screw key size 2.5).
- Also unfasten the ninth screw on the ground terminal while gripping the nut and the washer on the bottom.
- Slide the cover lightly backward.

- Unfasten the inserts of the XLR <u>output connectors</u> (LINE OUTPUT). The screw is well visible (same position as for the input sockets). Approximately one 90° counterclockwise turn (screwdriver size 00) is required. Carefully push the inserts inward.
- On reinstallation make sure that first the XLR output connectors (LINE OUTPUT) are installed with the cover in place but lightly shifted to the back. The cover can subsequently be screwed on and the remaining connectors can be mounted to this cover.
- On reinstallation make sure that the position of the two serrated lock washers is correct: on the left and right—hand side next to the connectors.

# Wooden side panels

 Unfasten four screws each (hexagon-socket-screw key No. 4)

# 3.2.3 TAPE DECK ELECTRONICS PCB 1.727.350 GR10

The TAPE DECK ELECTRONICS PCB with its heat sink is located in the middle of the rear part of the recorder and extends across its full width. It can be swung down in order to gain better accessibility.

- Remove the rear panel
- At the right-hand and left-hand rear corner of this assembly there is one latch each (accessible through the cutouts in the heat sink contour). Press both latches inward and swing down the printed circuit.

# Dismantling:

- Separate all plug connections.
- Open or separate all cable ties that fix the cables against the inside of the frame.
- The pivots also consist of latches; these have to be released in order to deinstall the assembly.
- On reinstallation make sure that the latches are engaged in the corresponding recesses of the unit. The cable must be reattached to the frame by means of cable ties (Part No. 35.03.0109).

If repairs are necessary please return the circuit board together with its frame for replacement.

# 3.2.4 Amplifier module

- AUDIO CONTROL PCB 1.727.400.GR 40
- AUDIO ELECTRONICS PCB 1.727.420 GR 41/42
- AUDIO ELECTRONICS PCB 1.727.421 GR 41/42
- AUDIO ELECTRONICS PCB 1.727.425 GR 41/42 (PBO version)
- INSERT, e.g. MONO/STEREO SWITCH INPUT PCB
   1.727.440 GR 44 OUTPUT PCB 1.727.445 GR 45

#### a.) Pulling out the amplifier module

- Remove the rear panel (see 3.2.2)
- The amplifier board is located below the TAPE DECK ELECTRONICS PCB and extends across the full width of the tape recorder. A latch is located at the lower right and lower left corner of the module. Press in both latches so that the module can be pulled back to the rear stop position.
- Separate all plug connections
- The stop consists of two additional latches.

# b.) Removing the AUDIO ELECTRONICS PCB

- Unfasten all plug connections on both AUDIO ELECTRONICS PCBs.
- Certain PCB versions feature two retaining brackets; unfasten them with a hexagon-socketscrew key size 2.5.
- To remove the PCB channel 1 GR 41 (located closer to the front panel) the retaining bar of the INSERT PCB(s) (if configured) must first be unfastened, otherwise its removal will be obstructed by the heat sink.
- One nut pin each is pressed into the upper left and right corner of the AUDIO ELECTRONICS PCB. Lift the circuit board simultaneously on both pins by means of a suitable tool (screwdriver). To prevent damage, utmost care is necessary because of the numerous plug contacts.

# c.) Removing the INSERT PCBs (if configured)

- These modules (e.g. MONO/STEREO switch) which can be switched on and off by means of the INSERT key on the front panel are located on the AUDIO CONTROL PCB 1.727.400 between the two AUDIO ELECTRONICS PCBs 1.727.420...
- Separate all plug connections on the rear AUDIO ELECTRONICS PCB and on the INSERT PCB.
- Unfasten two screws each to the left and the right of the mounting rail and carefully lift the assembly.
- In order to remove the INSERT PCB we recommend that you remove the AUDIO ELECTRONICS PCB GR 42 (channel 2) located closer to the rear panel. This provides better access to the INSERT PCB.

# d.) Removing the amplifier module

- Remove the AUDIO ELECTRONICS PCBs and the INSERT PCBs (see above).
- Unfasten the plug connection on the narrow side of the AUDIO CONTROL PCB 1.727.400.
- The two latches that form the stop of the drawer mechanism can now be released one at the time.

# e.) Installing the amplifier module

The installation is performed in the reverse order. When you plug in the connecting cables make sure that the connector assignment is correct (labelling on the connectors, numbering from left to right, viewed from the rear toward the recorder:

# EL 1, EL 2b, EL 2A, EL 3, EL4...EL 7

GR 41 = channel 1, front (front panel) GR 42 = channel 2, rear

 On reinstallation also make sure that the latches engage in the corresponding guide rails.

# 3.2.5 Panel

- COMMAND PANEL PCB 1.727.360 GR 30 (without VU meter)
- COMMAND PANEL PCB 1.727.361 GR 3Ø (with one VUmeter)
- COMMAND PANEL PCB 1.727.362 GR 3Ø (with two VU-
- COMMAND PANEL PCB 1.727.363 GR 3Ø (2/2 version, without VU-meters)
- COMMAND PANEL PCB 1.727.364 GR 30 (PBO version, reproduce only)
- DISPLAY PCB 1.727.370.00 GR 31

#### COMMAND PANEL

The COMMAND PANEL PCB is inserted into the recorder from the front and is fixed by the command panel.

In order to remove this board proceed as follows:

- Set the recorder upright
- Remove the rear panel, swing down the TAPE DECK ELECTRONICS PCB.
- Unplug the 3-pin connector (brown/red/orange connector labelled "GR 11, EL Ø6") on the SPOOLING MOTOR CONTROL PCBs above the pinch solenoid.
- Remove the operating panel (see 3.2.2).
- Unplug the VU-meter connections, if existing (brown stranded wire).
- Pull the assembly slightly toward the front, separate the multiple plug connection, and carefully pull the connecting cable (brown/red/orange) from the SHUTTLE potentiometer to the SPOOLING MOTOR CONTROL PCB through the slot toward the front.

# SHUTTLE UNIT

- Unfasten 2 screws on the front of the push button unit (hexagon-socket-screw key size 2.5).
   Carefully pull out the SHUTTLE UNIT toward the
- Carefully pull out the SHUTTLE UNIT toward the back.

# DISPLAY PCB:

Carefully pull the PCB out of the socket. Make sure that the pins are not bent.

# Narrow key housing:

- Squeeze the clips (on the solder side) and simultaneously pull the key housing from the component side toward the circuit board in order to cancel the mechanical pretension. The key housing can be lifted off after all clips have been released.
- Considerable pressure is required for reinstalling the housing. For correct engagement of the clips some assistance with a screwdriver may be necessary. Make sure that all clips are engaged properly.

### Wide key housing (with large tape command keys)

 Release the four clips on the solder side. Lift off the key housing.

# VU-meters, lamps for VU-meter illumination

- Unplug the stranded red (left) and black (right) connecting wires. Release the two clips on the solder side. Remove the measuring instrument.
- The bulbs ( 6 V, 30 mA, glass socket T 1½) are located in the sockets below the measuring instrument.

# Pilot LEDs

A807

 All LEDs on the COMMAND PANEL PCB are of the plug-in type. The cathodes of the LEDs always point either toward the right or the top.

# Switching mats

- The rubber contact mats can be lifted over the LED sockets after the key housings and the LEDs have been removed.
- On reinstallation make sure that the protrusions on the underside of the contact mat engage in the corresponding holes of the COMMAND PANEL PCB.

# 3.2.6 Tape lifter

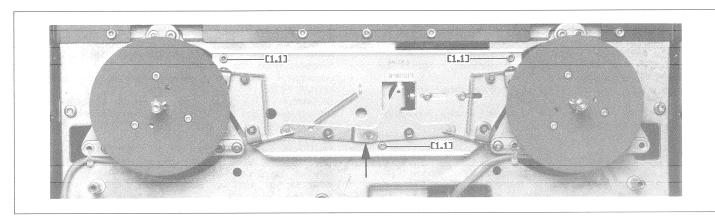
The explanations are enhanced by the illustration on page 8/4. The number in brackets refer to the information in this illustration. The same numbers can also be found on the on the opposite page.

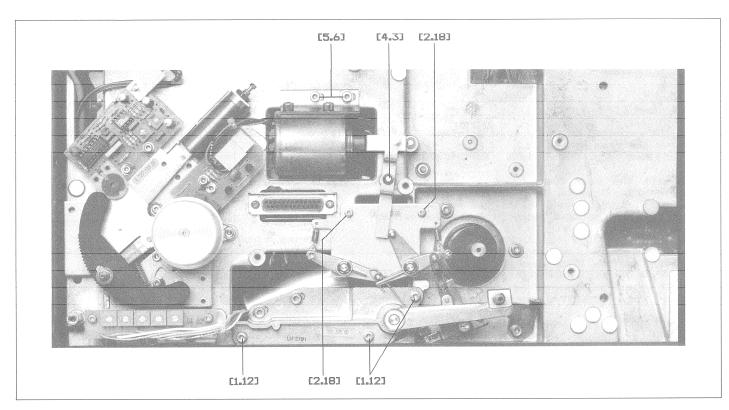
# Tape lifter assembly:

- · Set the tape recorder in upright position.
- Remove the headblock (3.2.1).
- Remove the transport cover (3.2.2)
- Unscrew the monitor speaker, if configured (1 x IS screwdriver size 2, 1 x size 2.5). Do not detach the connecting cable (no plug connection).
- Remove the circlip of the driving pin [4.3].
- Unhook the tension spring of the latch on the pin of the pinch roller arm, unhook the tension rod on the left-hand tape lift lever.
- Unfasten 2 screws [2.18] (hexagon-socket-screw key size 2.5)
- Remove the tape lifter assembly while simultaneously released the plastic clips from the pin of the pinch roller arm.
- On reinstallation make sure that <u>first</u> the plastic clips and then <u>the</u> tension spring of the latch are hooked into the pin of the pinch roller arm; subsequently engage the tension rod of the latch in the left-hand tape lift lever.

# Tape lift solenoid

- Remove the circlip of the driving lever [4.3], remove the driving lever.
- Unfasten 2 screws [5.6] (hexagon-socket-screw kev size 3)
- Carefully remove the solenoid toward the front.
   Do NOT tilt it, otherwise the armature drops out.
- Unplug the stranded connecting wires (grey, violet) at the solenoid.
- On reinstallation make sure that the polarity is correct! (violet = +).





# 3.2.7 Pinch roller assembly

- Set the record in the upright position.
- Remove the headblock (3.2.1)
- Remove the transport cover and the rear panel (3.2.2).
- Unscrew the monitor speaker, if configured (1 x hexagon-socket-screw size 2, 1 x size 2.5). Do not detach the connecting cable (no plug connection).
- Remove the circlip of the drive lever [4.3].
- Remove the tape lifter (3.2.6)
- Unplug the stranded wires (grey, violet) from the solenoid.
- Unfasten 3 screws [1.12] (hexagon-socket-screw key size 3).
- Carefully remove the pinch roller assembly toward the front and observe the positioning of the tension lever.
- On reinstallation make sure that the polarity of the connections is correct! (violet = +".

# 3.2.8 Tape tension and tape move sensor

- TAPE TENSION SENSOR PCB 1.727.320 GR 13
- TAPE MOVE SENSOR PCB 1.727.321 GR 24
- Remove the transport cover (3.2.2)
- Unplug one connecting cable each on the TAPE TENSION SENSOR PCB and on the TAPE MOVE SENSOR PCB.
- Unfasten 3 screws (only the one without locking paint!) (hexagon—socket screw key size 2.5)
- Lift off the assembly.

# 3.2.9 Tape brakes

- Set the recorder in upright position.
- Remove the rear panel (3.2.2)
- Unplug the 2 stranded wires (brown, violet) of the brake solenoid.
- Restore the recorder to its normal position.
- Remove the transport cover (3.2.2).
- Remove the spindles (3 screws each, hexagonsocket-screw key size 2.5).
- Unfasten 3 screws [1.1] (hexagon-socket-screw key size 2.5).
- Unplug the connecting cable.
- Apply light pressure to the movable connection of the two brake levers from the front to disthe brakes sufficiently so that the brake chassis can be carefully lifted off (see

The brake bands should be neither kinked nor touched on the inside with ungloved heads! Kinked brake bands should be replaced. If they are contaminated they can be cleaned with ethanol.

On reinstallation make sure that the polarity of the connections is correct! (violet = +).

# 3.2.10 Spooling motors

- Set the recorder to the upright position.
- Remove the rear panel (3.2.2). Swing down the TAPE DECK ELECTRONICS PCB
- Separate the plug connections of the spooling motor feeder lines on the SPOOLING MOTOR FILTER PCB. This circuit board is located in the righthand half of the unit below the spooling motor (viewed from the back). The CAPSTAN MOTOR PCB 1.727.330 GR 20 (3.2.14)
- should be removed before you remove the takeup motor (on the left, viewed from the rear).
- The SPOOLING MOTOR CONTROL PCB 1.727.340 GR 11 (3.2.11) should be removed before you remove the supply motor (on the right, viewed from the rear).
- out the spooling motor feeder through the chassis toward the front. Swing up the TAPE DECK ELECTRONICS PCB and
- Restore the recorder to the normal position.
- Remove the spindles (3 screws each, hexagonsocket-screw key size 2.5).
- Remove the brake chassis (3.2.9). After reinstallation the brakes must be readjusted (see 3.3.2). Do not touch the brake lining (reddish fabric) with ungloved hands!
- Unfasten three screws on each spooling motor, screwdriver size 3.
- Lift out the spooling motor toward the top.
- On reinstallation make sure that neither ring gear nor the light barrier into which the former engages, become damaged.

# 3.2.11 Spooling motor control

- SPOOLING MOTOR CONTROL PCB (1.727.34Ø GR 11)
- Set the recorder in the upright position.
- Remove the rear panel (3.2.2).
- Swing down the TAPE DECK ELECTRONICS PCB (3.2.3).
- Pull out the amplifier module to the stop position (3.2.4).

- Separate the plug connections of the spooling motor feeder lines on the SPOOLING MOTOR FILTER PCB. This circuit board is located in the righthand half of the unit below the spooling motor (viewed from the rear).
- Separate all plug connections on the SPOOLING MOTOR PCB.
- Unfasten 4 screws. The lower 3 screws can be unfastened by inserting the screwdriver between the lowered TAPE DECK ELECTRONICS PCB and the pulled out amplifier module.
- Pull out the SPOOLING MOTOR CONTROL PCB.
- On reinstallation make sure that the serrated washer is placed below the right-hand, upper fixing screw (ground connection). Also make sure that the polarity of the supply voltage feeder line is correct: the plus marking on the circuit board corresponds to the red positive line. Also make sure that the position of the insulated cover is correct: no connecting cables should be routed between the insulating cover and the circuit board.

# 3.2.12 Spooling motor filter

- SPOOLING MOTOR FILTER PCB 1.737.342 GR 12

subassembly is plugged into the SPOOLING MOTOR CONTROL PCB and fixed with 2 screws (hexagon-socket-screw key size 2.5). It should be un-plugged after the SPOOLING MOTOR CONTROL PCB has been removed.

# 3.2.13 Spooling motor Tacho

- SPOOLING MOTOR TACHO LEFT PCB 1.737.315 GR 17
- SPOOLING MOTOR TACHO RIGHT PCB 1.727.316 GR 18

The infrared light barriers on the SPOOLING MOTOR TACHO PCBs scan the ring gear on the spooling motor. 64 pulses are generated for each revolution.

For field repairs we recommend that only the fixing screws are unfastened and the circuit board with its cable harness should be left inside the unit.

- Unfasten 2 screws (hexagon-socket-screw kev size 2.5).
- For complete removal of the left-hand SPOOLING MOTOR TACHO PCB it is necessary to remove the CAPSTAN MOTOR CONTROL PCB and the SPOOLING MOTOR CONTROL' PCB (3.2.11 and 3.2.14).
- For complete removal of the right-hand SPOOLING MOTOR TACHO PCB it is necessary to remove the SPOOLING MOTOR CONTROL PCB (3.2.11).
- Unplug the connecting cables (yellow/green/black) on the SPOOLING MOTOR CONTROL PCB 1.727.340 GR 11 and unthread the cable.

### 3.2.14 Capstan motor

- Set the recorder in the upright position.
- Remove the headblock (3.2.1).
- Remove the transport cover and the rear panel (3.2.2).
- Disengage all latches of the TAPE DECK ELECTRONICS PCB 1.727.35Ø GR 1Ø and slide the circuit board to the back and down as far as the cable connections allow it.
- Separate the cable connections of the capstan motor control feeder lines on the CAPSTAN MOTOR CONTROL PCB.
- From the front unfasten three fixing screws of the capstan motor (hexagon-socket-screw key size 3) while supporting the motor on the back. When removing the motor toward the back and the reinstalling the motor proceed carefully to prevent any damage to the capstan shaft.

# 3.2.15 Capstan motor control

- CAPSTAN MOTOR CONTROL PCB 1.727.330 GR 20
- · Set the recorder in the upright position.
- Remove the transport cover (3.2.2).
- Swing out the TAPE DECK ELECTRONICS PCB toward the back.
- The CAPSTAN MOTOR CONTROL PCB is located to the left and above the capstan motor (viewed from the back of the recorder).
- Unplug all connecting cables, unfasten 4 screws (hexagon-socket-screw key size 2.5).
- On reinstallation make sure that a serrated washer is inserted under each of the four fixing screws (ground connection). Also make sure that the polarity of the feeder lines is correct: the plus marking on the circuit board corresponds to the red positive line. Also make sure that the position of the insulated cover is correct: no connecting cables should be routed between the insulating cover and the circuit board.

# 3.2.16 Power transformer

- Set the recorder in the upright position.
- Remove the transport cover (3.2.2)
- Remove the power supply cover (3.2.2)
- Unplug the multiple connector of the RECTIFIER PCB 1.727.31Ø GR 6 on the right-hand face (viewed from the back of the recorder).
- Unfasten the RECTIFIER PCB (4 screws, hexagonsocket-screw key size 2.5) and turn it to the left.
- Remove four shock protection tabs from the transformer terminals.
- Unplug the cable connections leading from the transformer to the voltage selector; sequence from left to right:

brown, red, orange, yellow, green, blue, violet, grey

- Unfasten the 4 fixing screws of the power transformer (hexagon-socket-screw key size 3).
- · Lift out the power transformer.

When returning the power transformer for repair, please send only the transformer 1.727.305.00 without the bottom plate and cover plate.

# 3.3 MECHANICAL ALIGNMENT

Prior to mechanical alignments please check whether all connectors are correctly inserted and properly seated.

Check supply voltage and switch on.

# 3.3.1 Brake maintenance

Brakes which lack appropriate checking and alignment can cause damage to tapes. Please check frequently if braking is smooth and constant and if there are no tape loops even with very different spool diameters.

Brakes and brake bands have to be clean and free of grease. Cleaning can be performed with methylated alcohol. Please take care that brakes or brake bands are not touched with fingers after having been cleaned.

Brake bands must not be kinked and should touch the brakes on their full width.

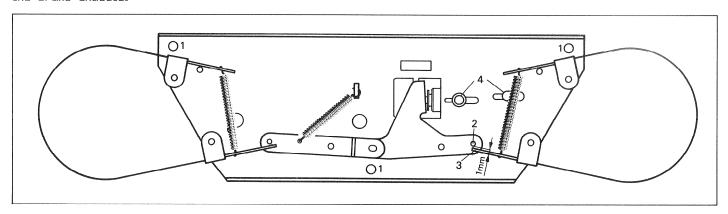
# 3.3.2 Brake adjustment

# a) Height of brakebands

When turning the reel flanges the brake bands must always be in the middle of the brake lining.

# b) Brake chassis alignment

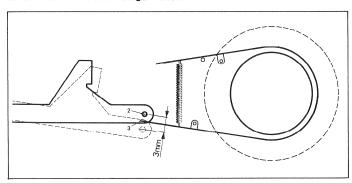
The brake bands are supported by a common chassis, the brake chassis.



By pulling the brake chassis in direction to the rear of the unit it can be aligned in such a way that the brake levers [3] have a clearance of approx. 1mm to the lifting pin [2] when braked. If a clearance of 1 mm is not adjustable the front brake lever has to be gently bent.

By shifting the brake chassis parallel to the front edge of the unit lifting of both pins can be adjusted to be equal.

#### c) Brake solenoid adjustment

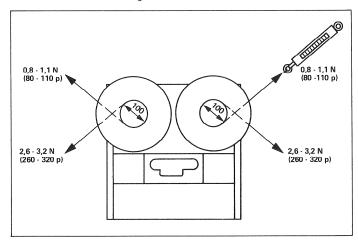


Move the tape tension sensor out of its idle position and press the "SHUTTLE" key. The brake will open; the lifting pin will travel 2 to 3 mm out of its rest position (see figure). The brake bands must not touch the brake drum when the reel flange is turned. Adjust by shifting the solenoid; tighten the screws [4] again firmly.

When turning the reel flanges the brake bands must always be in the middle of the brake lining.

# d) Checking the brake torque

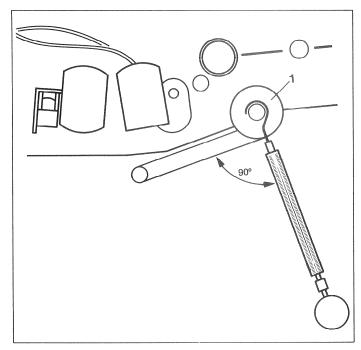
After alignment a measurement of the brake torque is advisable (see figure).



Are the obtained results different from the data in the figure and you are sure that the brakes and brake bands are absolutely clean, try to hook the springs at a different position.

# 3.3.3 Pinch force adjustment

- Remove the pinch roller cover (Allen key 2.5) and turn the screw back into the shaft.
- Move the tape tension sensor out of its rest position. Press the TAPE DUMP key (if thy TAPE DUMP key has been jumper-programmed to a preselection key, the PLAY key must be pressed also).



Hook the spring dynamometer into the screw and pull the spring dynamometer perpendicularly to the pinch roller arm until the pinch roller lifts off the capstan shaft. The dynamometer should give a reading of 8 .. 10 N (800 .. 1000 p). If the reading is above or below this range, lightly loosen the two fixing screws of the pinch roller solenoid (Allen key No. 3) and carefully shift the solenoid until the normal value is attained. Retighten the solenoid screws.

Make sure that the arm moves smoothly to the rest position; if not, the solenoid is out of line.

# Verifying the adjustment:

- Move the tape tension sensor out of the rest position.
- Press the pinch roller arm lightly with one finger against the capstan until the pinch roller just starts to turn.
- Press the TAPE DUMP key (depending on programming together with PLAY).

Now the pinch roller should again move slightly but clearly visibly towards the capstan. This ensures that the pinch roller solenoid pulls through completely so that only the tension spring in the solenoid armature constitutes the coupling between the solenoid lever and the pinch roller arm. Check by repetition that this process is clearly visible.

If no perceptible play can be observed the pinch roller force must be increased by shifting the solenoid in line.

# 3.3.4 Head adjustment check

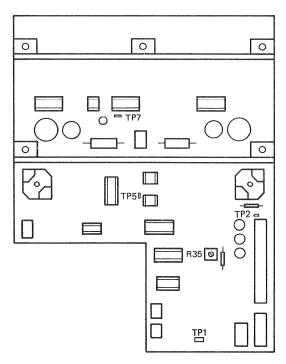
Check the headblock on a levelling plate or on a flat glass plate. Height and perpendicularity may be tested by means of the gauge order no. 10.010.001.02 and the reference block order no. 10.010.001.01.

When fixing the head block again push the headblock completely towards the rear of the unit while tightening the fixing screws.

Be absolutely sure to have power off during removing or installation of the headblock (danger of magnetizing the heads).

# 3.3.5 Tape lift solenoid

- Switch power on and load a tape. Press a wind key.
- Loosen the two lower screws of the tape lift solenoid and adjust that the tape is lifted 2 mm off the heads but without touching the raised headshield.
- Check that the aramature moves freely in the solenoid. The internal monitor speaker must be dismounted for that check.
- After alignment tighten screws again firmly.
   Reinstall the speaker.



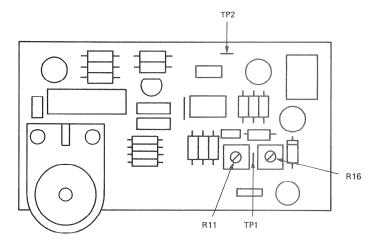
# 3.3.6 Tape tension sensor

# At first put machine in upright position:

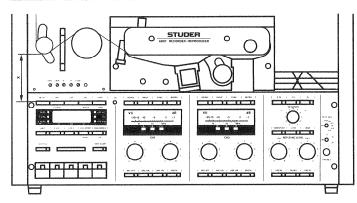
- Load tape.
- Connect Voltmeter to TP 5 (+) and TP 2 (ground) on the SPOOLING MOTOR CONTROL PCB 1.727.340 (GR 11).
- Hold the right tape pancake with your hand and switch the machine to FAST FORWARD.
- Adjust 10.0 Volt DC by means of R 35 on this board.
- Stop the machine.

# Then put machine to the horizontal position:

- Connect voltmeter to TP 1 (+) and TP 2 (ground) on the TAPE TENSION SENSOR PCB 1.727.320 (GR 13).
- Press tape tension sensor to the rear until distance "X" (see figure) is 85 mm. With the upper trimmer pot R 16 adjust to Ø.Ø V; with the tape tension sensor released to the rest position (approx. distance of "X" = 46 mm) adjust +4.Ø V by means of the lower trimmer pot R 11. The allowed tolerance is ± Ø.Ø5 V.
- Re-check both readings and correct, if necessary.



# 3.3.7 Tape tension



- Load tape (100 mm hub) and spool up to the middle.
- Unscrew left splicing block. The potentiometers for the tape tension adjustment will become accesible.
- Adjust the following values:

PLAY: Insert a tape tension meter between the left reel and the tape tension sensor. Press the key PLAY. By means of the trimmer "Play" adjust to 60 p ± 2 p; the distance "X" should be in the range of 58 to 62 mm.

WIND: Press the key WIND. Adjust "X" equal to 57 mm by means of the trimmer "Wind".

REWIND: Press the key REWIND. Adjust "X" equal to 67 mm by means of the trimmer "Rewind".

LIBRARY WIND: Set this mode by pressing SHIFT and REWIND together. Adjust for best pancake with your preferred brand by means of the trimmer "Libr". Factory setting is "X" equal to 65 mm.

SHUTTLE: Press the key SHUTTLE. Adjust so that the tape does not move. After a slight kick of the right hand spool in either direction the tape should come evenly to stop both ways.

# 3.3.8 Lifting Pin

During spooling adjust the height of the two lifting pins thus the tape would not move up or down when the tape is lifted off the heads.

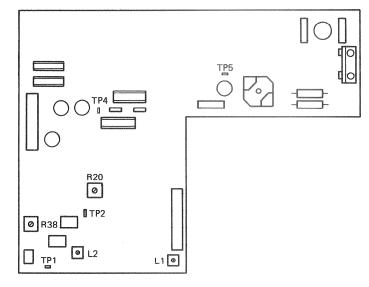
# 3.3.9 Capstan motor control

- Connect counter to TP 1 (Ø V to TP 4) on the CAPSTAN MOTOR CONTROL PCB 1.727.33Ø (GR 2Ø).
- Adjust the frequency to 5.5 MHz (± 200 kHz) by means of L 2.
- Switch the machine to 7.5 ips and press PLAY.
   Connect Oscilloscope or Multimeter (AC range) to
   TP 2 (Ø V to TP 4). Adjust maximum reading by
   means of L 1 (approx. 2 Volt RMS)

If you have a Wow and Flutter Meter, adjust flutter minimum by means of R  $2\emptyset$  (Switch machine to  $3\ 3/4$  ips).

Alternatively (if no W+F Meter is available):

- Connect oscilloscope to TP 5 (Ø V to TP 4).
   Select AC range. Adjust to minimal jitter by means of R 2Ø.
- Listen with a big screwdriver or a stethoscope to the capstan motor. The screwdriver blade should be pressed to the motor housing, the shaft to the ear. Try to minimize the mechanical noise by means of R 20.



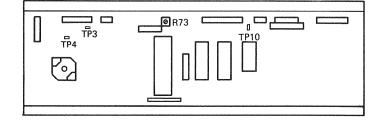
# 3.3.10 Varispeed circuit

- Connect counter to TP 2 (Ø V to TP 4) on the CAPSTAN MOTOR CONTROL PCB 1.727.33Ø (GR 2Ø).
- Knob "DEVIATION" to Ø; Switch Varispeed on, machine to 15 ios.
- Adjust frequency by means of R 38 to 1200 Hz.

# 3.3.11 Transparent tape sensor

- Connect DC voltmeter to TP 10 (0 V to TP 4) on TAPEDECK ELECTRONICS PCB 1.727.350 (GR 10).
- If there is no tape or clear tape in the sensor gap, the voltage at TP 10 should be approx. 5.6 V; with tape (or colored tape) approx. 10 V.

Adjustment by R 73.



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# AUDIO

# CIRCUIT DESCRIPTION

#### Note:

Information concerning the design of the audio electronics can be found in 4.1.1. Introduction; the basic function is subsequently described with the aid of level diagrams (4.1.2. a and b). Information concerning the functional details, as as the alignment and programming instructions, can be found beginning with Section 4.1.3.

# 4.1.1 Introduction

The complete audio electronics are implemented on a pull-out chassis. It comprises the:

- AUDIO CONTROL BOARD, GR 40 which contains the control electronics as well as the connectors for the channel boards.
- Channel boards (AUDIO ELECTRONICS BOARD, GR41/42).

Each of these channel boards (in stereo versions there are two) contains the record, reproduce, and sync amplifier, depending on the model.

The audio electronics board for the left-hand channel is located nearest the front (viewed from the front of the machine), the board for the righthand channel is located nearest the back.

addition to the amplifiers, these electronics boards also contain the control elements for adjusting the operating parameters. Some of these are implemented as conventional trimmer potentiometers: for matching the input and output levels to the internal reference level. All other adjustments, particularly those for changing over to other tapes, other flux values or for compensating the loss at high frequencies are performed with DACs. These have the advantage that the parameters can be stored and retrieved from memory at any time.

The audio electronics boards are available different configurations. The descriptions in this section refer to the fully configured boards. The numbers of the audio electronics boards are coded as follows:

#### 1.727.4ab.xx

# where

- a = 2:for use with high-µ heads 1.317.xxx.xx
- a = 6:for use with glass metal heads 1.318.xxx.xx
- b = 0:fully configured version
- b = 1:stereo without VU-meters (without MIC and SYNC)
- b = 2:2-channel with VU-meters, console version (without MIC)
- b = 3:2-channel without VU meters, but with output selector
- b = 5:playback only
- b = 7 :same as 2, but with high tape speed
- :same as O , but with high tape speed

The digital circuits required for controlling the DAC's on the audio electronics boards as well as other control circuits are located on the audio control board. In addition to the connectors for the audio electronics boards, it features additional slots into which other options can be plugged, i.e.:

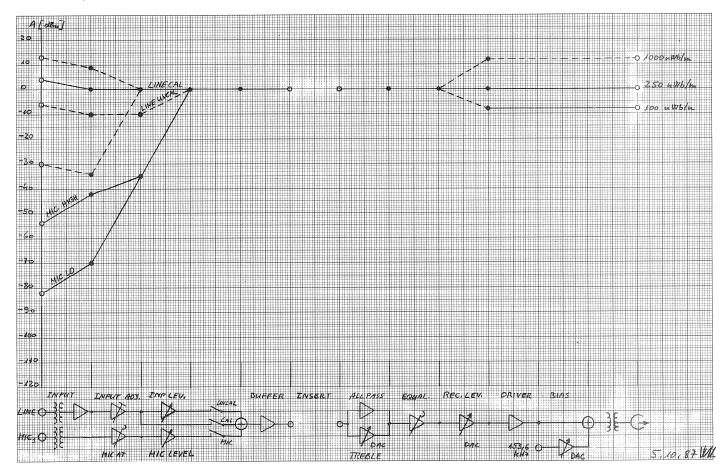
- Preamplifier for a second reproduce head (GR 43),
- Mono/stereo switch for record and reproduce mode with built-in test generator (GR 43 46).

The parameters for controlling the DACs are set and retrieved via the front panel (refer OPERATION, Section 2).

# 4.1.2 Level diagram

The signal flow through the unit can best be described using on the level diagram with a greatly simplified block diagram:

#### a) Record path



The unit is equipped with a balanced line input and a balanced microphone input. Both signals first pass through separate amplifiers; the basic gain (Input Adj. or Mic. Att) can be adjusted individually for each path. In the case of the line input, this adjustment is used for matching the external levels to the internal reference level of O dBu; for operation according to CCIR standard and for studio installations which are monitored with peak reading meters, it should be noted that all calibration levels are 6 dB below the peak levels.

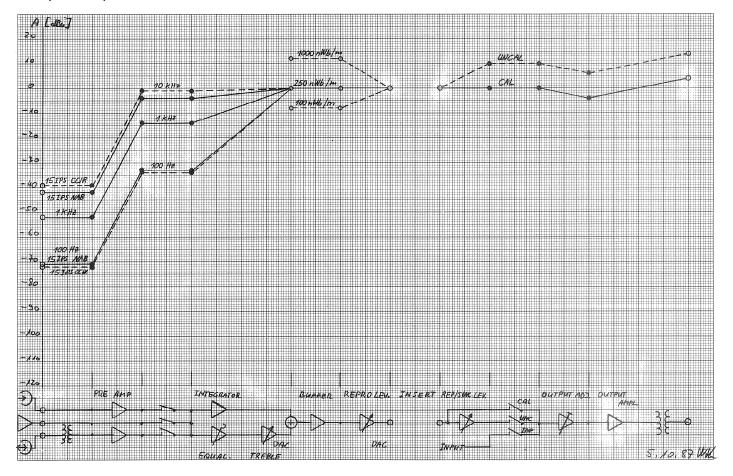
Example: peak recording level: +6dBu
Input level: OdBu
Internal ref. level: OdBu

The microphone input level can be controlled with the MIC LEVEL potentiometer. Also in the UNCAL position the line input can be adjusted with the INPUT LEVEL potentiometer. Since the microphone path and the line path to the summation point are independent, both inputs can be operated in mixed mode (example: voice announcement to music).

After the summing amplifier, a level of 0 dBu is available at the "Insert" point if the calibration is correct. Either the monitoring path or the output amplifier is connected to this point when the input signal is to be monitored. An additional circuit such as the mono/stereo switch can also be brought into the circuit at this point.

The signal path is subsequently split: a high-pass (TREBLE) path with DAC controllable gain for treble adjustment, and a wide-band path with group delay equalized by an all pass filter. This element is followed by the fixed, selectable standard equalization networks, the record level controller for determining the desired tape flux (also implemented with DACs), the bias superposition, and the record head.

# b) Reproduce path



The reproduce amplifier has three selectable inputs:

- from the normal reproduce head via the preamplifier to the audio electronics board,
- from a supplementary reproduce head (if configured) via a separate preamplifier which is plugged into the audio control board, or
- from the record head (sync function, if configured).

The reproduce equalization can be adjusted by means of a DAC; an integrator is responsible for the basic compensation of the amplitude response which increases proportionally with the frequency. Also the reproduce level can be matched via DAC to the previously selected tape flux. After this DAC an insert point with internal reference level is reached. In the input mode the input signal from that insert point is picked up here.

The output line level can also be adjusted (UNCAL position) or be selected with 'a fixed setting (CAL position).

# 4.1.3 Input amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx

The line input and the microphone input are each taken via a low pass filter in order to suppress high-frequency noise signals.

The basic gain for the line input is adjusted with R18; however the unit must be operated in CAL mode. In order to simplify the alignment, three adjustment ranges can be selected

Input level range: Jumper JP 1 in position:

-4 to +12 dBu A -17 to -1 dBu B -30 to -14 dBu C

The signal from the microphone is taken via an input transformer to the amplifier. In order to prevent overloading of the amplifier when high-level microphones are used, the gain can be decreased by approx. 28 dB by means of the MIC ATT key. The three paths Line cal, Line uncal, and Microphone are selected by the logical control signals:

C - CALINX (line cal)
C - UNCINX (line uncal)
C - MICONX (microphone)

This selection takes place in IC 4. Since several signals can be selected at the same time, mixdowns are also possible (example: voice announcement to music).

# 4.1.4 Record amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx

From the insert point the audio signal A - RECINX is split into two paths: a high-pass path (TREBLE) in which the treble adjustment is made by the DAC IC 11/2, and a wide-band path (IC 5/1 with connected all-pass filter IC 6/2 for compensating the group delay). In IC 6/1 the two paths are summed again. The signal now passes through the standard equalization stage (IC 8/2) in which the equalization is changed, as a function of the selected standard and speed, by the control signals C-EGA and C-EGB.

Certain standard equalizations contain the 3180 µs time constant which becomes active at low frequencies (See Fig.4.2.1a).

This bass equalization is enabled by the jumpers W4 to W7 which are configured depending on the speed version. On standard models shipped by the factory the jumpers W5 and W7 are installed.

The STUDER A807 professional tape recorder is equipped with a facility for optimizing the output level at high frequencies according to the DOLBY HX PRO system. This system is enabled with the jumper JP 2; when it is in the ON position (factory setting), HX PRO is active.

The time constants for the buildup and decay of the RF bias and the voltage for the erase head are generated by the circuits around IC 7/1 and 7/2 respectively. The RF bias is adjusted with the DAC IS 12; it produces a DC voltage at the output which causes the voltage of the RF bias to be adjusted in the OTA (Operational Transconductance Amplifier). The DOLBY HX PRO control circuit intervenes at this point.

The erase head voltage is controlled via the OTA IC 16/1. For calibration it is adjusted with R 139 (measurement on test point TP 3).

It should be noted that the erase circuit is aligned to minimum current with the aid of T  $\Im$  (measurement on TP 4).

### 4.1.5 Reproduce amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx The signal from the reproduce head is first amplified in a low-noise preamp (Q 26 and IC 19).

The analog switch IC 17 selects between the normal reproduce head, the record head, as the sync reproduce head, or an optional second reproduce head. The sync preamplifier and the preamplifier for the second reproduce head, that can be plugged into the audio control board, basically have a similar design to the reproduce amplifier.

The filter with L 6 and C 95 to C 97 is used to suppress bias components in the output voltage.

The signal path is subsequently split into two. IC 20/2 is wired as an integrator and thus equalizes the reproduce frequency response, which basically increases in proportion to the frequency when the reproduce head is connected into a high impedance. At low frequencies a small amount of ripple is produced in the frequency response by the head face. This ripple is compensated by the combination of R 219 and C 129. At low tape speeds this RC time constant is bypassed by FET G 24.

The resistors selected by the analog switch IC 18/2 limit the integration behavior at very low frequencies; the standard equalization of 3180  $\mu s$  is thus activated (for NAB).

The upper signal path is laid out in such a way that it dominates, starting with medium frequencies. This means that as the frequency rises the response changes from integrator characteristic to a linear condition. This transition frequency corresponds to the standard equalization. At even higher frequencies the signal is again branched off via C 99 and amplified by IC 21/1. The gain of this path can be influenced with DAC IC 23/3 (TREBLE adjustment).

All three paths are summed in IC 25/1. It is followed by the DAC IC 23/1 for controlling the total reproduce level.

#### 4.1.6 Line amplifier

See circuit diagram 1.727.42x.xx or 1.727.46x.xx
The line amplifier (output amplifier) receives its input signal A — DRVINX from the reproduce insert point. This signal first passes through a voltage divider which is activated when FET Q 28 conducts. This FET is activated as soon as double the nominal tape speed is exceeded in spooling mode. With cueing enabled, this prevents the occurrence of high output levels and high frequencies which are annoying and could even destroy the connected speaker. This voltage divider decreases the signal level by approx. 12 dB and also limits the frequency response.

With the analog switch IC 26, one of three line

- Normal reproduce path
- Reproduce path via repro level control and IC22/1 which provides a basic gain of 10 dB, or
- directly from the insert point of the input amplifier (signal A - PREOUX).

In certain modes, IC 26 can disable (mute) all three inputs.

To prevent clicks at the output when the unit is switched on or off, the relay K 2 interrupts the signal path before and after the output amplifier.

At the output the adjustment of the output level (with R 246) can be changes by selecting different adjustment ranges.

Output level range: Jumper JP 3 in position:

-4 to +12 dBu A -17 to -1 dBu B

#### 4.1.7 Monitor (standard version)

#### See circuit diagram 1.727.120.xx

With the monitor it is possible to monitor either the input or the reproduce signal. The source signal is tapped at the insert points. If the input signal is monitored, the position of jumper JS 1 (left-hand channel) or JS 2 (right-hand channel) on the audio control board defines whether the signal is monitored before or after the insert point. This selection is only meaningful if internal or external options are connected to the insert points and if the jumper connections W 2 or W3 (on the audio control board) are consequently open.

The desired signal (input or reproduce) is selected by pulling out (input) or pushing in (output) the knob of a logarithmic potentiometer which is also responsible for the volume control. The output signal is tapped after the output selector, in parallel with the VU-meters. The selected signals are subsequently amplified by 20 dB by means of one amplifier per channel (IC 11/1 left, IC 11/2 right). The monitor signal is available at a stereo jack socket; if headphones are not plugged in, the signals are fed to the speaker amplifier.

#### 4.1.8 Stereo monitor (special version)

See circuit diagram 1.727.910.xx

With this monitor it is also possible to monitor either the input or the reproduce signal picked up at the corresponding insert points. The explanations given in 4.1.7 similarly apply to this version.

In addition two auxiliary inputs (AUX 1 or AUX 2) can be selected. By changing the setting of jumper JP 1 on the monitor board, it is possible to determine whether Aux 1 is used as the source for both monitoring channels or whether AUX 1 and AUX 2 are to be considered as a stereo pair.

The inputs are selected by IC 4. The logical control for this IC is also located on the monitor board. The signals of the momentary-action push buttons Input, Tape, and Aux are stored in the NOR flipflops IC 14 and 15. The stored states are indicated by the LEDs DL 1 through 3. The logical gating before the flip flops prevents double assignment and causes a reset when new input signals become available. The monitoring left, right, or stereo, is enabled in a second analog switch IC 6. The logical control of IC 6 is similar in design to that of the source selection. The monitoring volume determined by a stereo potentiometer. If no headphones are plugged in, the socket contact connects the input to the output amplifier. A muting circuit (Q 1 or Q 2) is located at the input of the speaker amplifier. It interrupts the signal path in the event of a remote fader start. The monitor speaker thus cannot interfere when the program is on the air.

## 4.1.9 Mono switch and test generator (option)

a.)Test generator

See circuit diagram 1.727.441.xx

The test generator produces the following frequencies by changing the ext. componets to IC 5:

60, 125, 1k, 10k, and 16 kHz

The level is attenuated in steps of O, -10dB, -20dB, and OFF by the analog switch IC 6. IC 7 is the output amplifier.

The test signal is mixed down to the audio channels via IC 1/1 or 1/2.

#### b.)Mono switch, input

See circuit diagram 1.727441.xx or 1.727.451.xx From the outputs of the two amplifiers IC 1/1 and 1/2, signals are branched off and added by the summing amplifier IC 2/1. A prerequisite for proper mono signal creation is that the jumpers JP 1 and JP 2 are in position A. Stereo or mono is selected with the analog switch IC 3/1 and 3/2.

#### c.)Mono switch, output

See circuit diagram 1.727.442.xx or 1.727.452.xx At the outputs of the two amplifiers IC 4/1 and 4/2, signals are branched off and combined to a mono signal by the summing amplifier IC 3/1. Depending on the position of jumpers JP 1 and JP 2, the mono signal appears either at the left—hand, the right—hand, or both outputs (this selection is performed by the analog switches IC 2/1 and 2/2).

#### 4.1.10 Control logic (AUDIO CONTROL BOARD, GR 40)

See circuit diagram 1.727.400.xx or 1.727.401.xx
The microprocessor is responsible for all control functions of the audio electronics. The control signals and the data are generated in the CPU (IC12, TAPE DECK ELECTRONICS, GR10) and output serially via IC 28 on five lines.

The signals on these lines are as follows:

AS -	WREN	Write enable
AS -	STRAB	Strobe for data register and
		chip select AB
AS -	CLK	Clock
AS -	DATA	Serial data
AS -	STR	Strobe for the other registers

The data arrives via the AS - DATA line, all other lines carry control signals.

The valid data records are latched into the instruction registers IC 1 through 5 and IC 9, depending on the control signal. The individual registers fulfill the following functions:

IC3	register	1:	Input control	see	Fig.4.1.1
IC5	register	2:	EQ control	see	Fig.4.1.2
IC4	register	3:	Record control	see	Fig.4.1.4
IC9	register	4:	Output control	see	Fig.4.1.5
IC1	register	5:	Address register	see	Fig.4.1.6
IC2	register	6:	Data register	see	Fig.4.1.7

The last two registers are used in conjunction with the AS - STRAB control signal for controlling the DACs.

The truth tables of the registers are summarized below; commands with the prefix C (control) are control commands for the audio boards, commands with the prefix S (switch) are initiated when an input function (e.g. key) is actuated.

However, these do not occur individually because the keys are read out from a matrix. The commands with prefix S are sent to the CPU already in coded form.

The generation of the commands C-EQB depend on whether the machine is a standard, a high-speed or a low speed version. The truth table is as follows:

# VERSION: Jumper W5 Jumper W6 in pos. Standard A A A High-speed B B

В

Low-speed

Jumper W 1 is not needed when a mono erase head is used.

C

### 4.1.11 Preparation of the erase and bias signals

See circuit diagram 1.727.400.xx or 1.727.401.xx
The 307 kHz clock frequency derived from the internal clock signal (IC 11 TAPE DECK ELECTRONICS, GR 10) is supplied to the AUDIO CONTROL BOARD (AS-HFCLK). IC 12 functions as a frequency divider, IC 13/1 and 13/2 as a low-pass filter. From the 153 kHz square-wave signal, this circuit filters out the basic frequency for the bias. A distortion of less than 0.1% is achieved.

#### Audio Control Board 4.1.12

#### Logic tables:

REGISTER 1:	Input Con	trol CH1 (IC	3)						8	酸	8	C-MICAT 1 C-MICON 1 C-CALIN 1 C-UNCIN 1	
S-MICAT 1	S-MICON 1	S-LINON 1	S-UNCAL 1									Notes :	
0	0	0	0	×	×	×	×	0	0	0	0	Line off, Mic off	*
0	0	0	1	×	×	×	×	0	0	O	0	Line off, Mic off	車
0	0	1	0	х	×	×	×	0	0	1	0	Line on Cal	*
0	0	1	1	×	×	×	×	0	0	0	1	Line on Uncal	水
0	1	0	0	х	×	×	х	O	1	0	0	Mic on	水
0	1	0	1	ж	×	×	X	0	1	0	0	Mic on	*
0	1	1	0	х	×	×	×	0	1	1	0	Mic on, Line on Cal	*
0	1	1	1	х	×	×	×	0	1	0	1	Mic on, Line on Uncal	- 本
1	0	0	0	×	×	×	×	1	0	0	0	Line off, Mic off	#
1	0	0	1	х	×	×	×	1	0	0	0	Line off, Mic off	#
1	0	1	0	х	×	×	X	1	0	1	0	Line on Cal	#
1	0	1	1	х	×	×	×	1	0	0	1	Line on Uncal	#
1	1	0	0	х	×	×	×	1	1	0	0	Mic on attenuated	#
1	1	0	1	х	×	×	×	1	1	0		Mic on attenuated	#
1	1	1	0	х	×	×	×	1	1			Mic on att., Line on Cal	#
1	1	1	1	×	×	×	×	1	1	0	1	Mic on att., Line on Uncal	. #
	Mic sensitivit						2 dE	u /	#	= -54	l dBu		

The microphone input level sensitivity changes. S-MICAT 1 The microphone input will be switched on or off.
The line-input will be switched on or off.
The line level control potentiometer will be switched on or off. S-MICON 1 S-LINON 1

S-UNCAL 1

REGISTER 1:		22							C-MICAT 2 C-MICON 2			
(same as CH	same as CH1 exept)											C-CALIN 2 C-UNCIN 2
S-MICAT 2	S-MICAT 2 S-MICON 2 S-LINON 2 S-UNCAL 2											Notes :
0	0	0	0	0	0	0	0	×	×	×	×	Line off, Mic off *
	26 TH	m as			**			* 11	**	W 50	88	50200
1					1	0	1	×	×	×	ж	Mic on att., Line on Uncal #

Fig.4.1.1

REGISTER 2: EQ Control (IC 5)								9	<b>81</b>	9		C-EQ-M (A	Activ	LOW) LOW) LOW)
S-NAB	S-SPD-F	S-SPD-M	S-SPD-S									Notes: H	15-Vers	sion:
0	0	0	1	х	х	×	×	0	1	1	0	CCIR 3.75ips	CCIR 7	7.5ips
Ō	Ō	1	0	х	×	×	×	0	1	0	1	CCIR 7.5 ips	CCIR :	15 ips
0	1	0	0	х	×	×	×	0	0	1	1	CCIR 15 ips	CCIR 3	
1	1 0	lo	1	×	×	×	×	1	1	1	0	NAB 3.75ips	NAB 7	7.5ips
1	0	1	0	х	×	×	×	1	1	0	1	NAB 7.5 ips		15 ips
ī	1	0	0	×	×	ж	ж	1	0	1	1	NAB 15 ips	NAB 3	30 ips

REGISTER 2:	量	<b>10</b>							C-SECHD C-OUTSW C-CUEAT (Activ LOW) C-INSERT			
S-SECHD	S-POWER	S-LIFTER	S-INSERT									Notes :
0	0	0	0	0	0	0	0	х	×	×	×	
0	1	0	0	0	0	1	O	×	×	×	×	Power-ON
1 0	1	0	0	0	1	1	0	×	×	×	×	2 sec after Power-ON
0	1	0	1	0	1	1	1	×	×	×	×	INSERT enabled
1 0	1	1	0	0	1	0	0	×	×	×	×	Lifter disabled, Cue att.active
	1	1	1	0	1	0	1	×	×	×	×	Lifter disabled, INSERT enabled
1	1	0	0	1	1	1	O	×	×	×	×	Second REPRO-Head enabled
0		×	×	×	0	х	×	×	Х	х	х	Immediately after Power-OFF

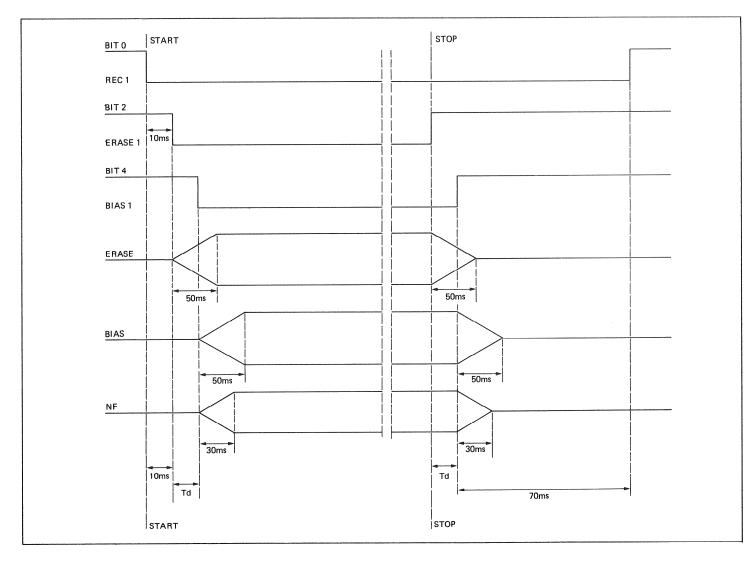
S-NAB	NAB equalisation is chosen with S-CCIR selected, S-NAB will be cancelled and vice versa.
S-SPD-F	High tape speed
S-SPD-M	Medium tape speed
S-SPS-S	Low tape speed
S-SECHD	Enabling of the second reproduce head
S-POWER	Tape recorder switched on
S-LIFTER	Tape – lifter enabled
S-INSERT	Insertation (or enabling) of an option like
	Mono/Stereo switch or testgenerator etc.

Fig.4.1.2

For the subsequent processing of the command C-SECHD refer to Decoder IC 8. (Fig.4.1.3)

DECODER IC					19	繼	SQ.	88	C-REPRO1 C-SYNC1 C-SECRP1 C-REPRO2 C-SYNC2 C-SECRP2	
C-SECHD	C-SYNC1	C-SYNC2							CH 1	CH 2
0	0 0 1	0 1 0	1 1 0	0 0 1	0	1 O 1	0 1 0	0	Reproduce Reproduce Sync	Reproduce Sync Reproduce
1 1 1 1	1 O O 1 1	1 O 1 O 1	0 0	1 0 0 1 1	0 1 1 0	0 0 0	1 0 1 0	0 1 0 1 0	Sync 2. Head, Repro 2. Head, Repro Sync Sync	Sync 2. Head, Repro Sync 2. Head, Repro Sync

REGISTER 3: Re	REGISTER 3: Record Control (IC 4)						89	82	<b>68</b>	99	Reserve C-BIAS2 C-ERASE2 C-REC2 Reserve C-BIAS1 C-ERASE1 C-REC1
S-READY1	S-READY2	S-REC									Notes :
n	0	0	×	0	0	0	×	0	0	0	Refer to drop in/
	ň	Ö	×	Ö	ō	ō	×	ō	ō	ō	drop out time table
Ô	1	ō	х	0	0	0	x	0	0	0	
l i	1	o	х	0	0	0	х	0	0	0	
0	O	1	×	0	0	0	х	0	0	0	By activating the signal
1	0	1	×	0	0	0	×	1	1	1	S-PLAY again, S-REC will
0	1	1	ж	1	1	1	×	0	0	0	become = 0 (LOW)
1	1	1	×	1	1	1	×	1	1	1	



Td

Timedelay in ms Distance between erase - and record head Lh

Tape speed in cm/s

Example: (Td = 115ms) (Lh = 43.8mm) (Vt = 38.1cm/s)

REGISTER 4:	8	鬱	88		100	<b>S</b>	<b>63</b>	98	C-INPUT2 C-UNCOU2 C-CALOU2 C-SYNC2 C-INPUT1 C-UNCOU1 C-CALOU1 C-SYNC1			
S-INPUT1	S-SYNC1	S-REPRO1	S-UNCOU1									Notes :
1 0 0 1 0	0 1 0 0 1	0 0 1 0 0	0 0 1 1 1	х х х х	х х х х х	х х х х	× × × ×	1 0 0 1 0	0 0 0 0 1 1	0 1 1 0 0	1 1 0 0 1	See note 1 and note 2 Input 1 calibrated note 2 Sync 1 calibrated Repro 1 calibrated Input 1 calibrated Sync 1 uncalibrated Repro 1 uncalibrated
S-INPUT2	S-SYNC2	S-REPRO2	S-UNCOU2									Notes :
1 0 0 1 0	0 1 0 0 1	0 0 1 0 0	0 0 0 1 1	1 0 0 1 0	0 0 0 0 1	0 1 1 0 0	1 1 0 0 1	× × × ×	× × × × ×	× × × ×	× × × × ×	See note 1 and note 2 Input 2 calibrated note 2 Sync 2 calibrated Repro 2 calibrated Input 2 calibrated Sync 2 uncalibrated Repro 2 uncalibrated

The above push buttons will cancel their function when pressing them again.

#### MUTE CONTROL Note 1:

The output signal will be muted during each transient Status like starting and braking phase.

#### Note 2: SYNC/INPUT change over

By entering the record command while the machine is in SYNC - mode, the record enable signal S-READXY automatically switches off the signals CALOUI , CALOUZ , UNCOUI and UNCOUZ and enables the INPUT1 resp. INPUT2 signals instead. Entering the PLAY - Command again will cancel the above signals

and the previous status will return.

Fig.4.1.5

#### REGISTER 5: Address Register (IC 1)

To control the audio parameters

Parameter: - TREBLE channel 1,2; Rec, Repro

- LEVEL channel 1,2 ; Rec, Repro - BIAS channel 1,2 ; Rec

Control signals: - AS-STRAB (A/B)

- AS-STRAB (A/B) - WR-RECx , WR-BIASx , WR-REPRx

- A-DO...A-D7

		æ	u u	<b>S</b>	8		#	R	Reserve WR-BIAS2 WR-REC2 WR-REPR2 Reserve WR-BIAS1 WR-REC1 WR-REPR1
STROBE A/B									Notes:
×	×	0	0	0	х	0	0	0	
0	×	0	0	0	×	0	0	1	Level , channel 1, reproduce
1	×	0	0	0	×	0	0	1	Treble, channel 1, reproduce
0	×	0	0	0	×	0	1	0	Level , channel 1, record
1	×	0	0	0	×	0	1	0	Treble, channel 1, record
×	×	0	0	0	×	1	0	0	Bias , channel 1
1	×	0	0	1	×	0	0	0	Level , channel 2, reproduce
0	×	0	0	1	×	0	0	0	Treble, channel 2, reproduce
1	×	0	1	0	×	0	0	0	Level , channel 2, record
0	×	0	1	0	×	0	0	0	Treble, channel 2, record
×	×	1	0	0	×	0	0	0	Bias , channel 2

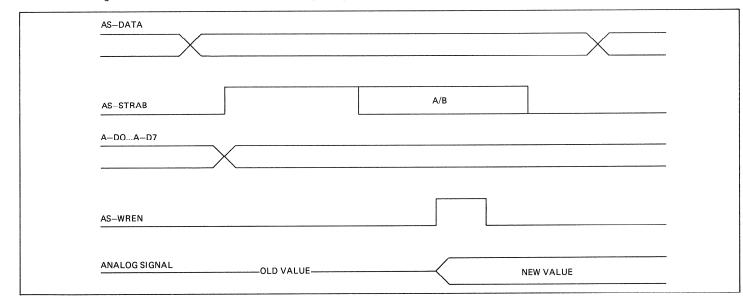
After pressing one of the following push buttons, new audio parameters will be read into the DAC's:

S - Speed-x (Tape speed)
S - CCIR (Equalization)
S - NAB (Equalization)
S - TAPE-x (Tape sort)

Fig.4.1.6

The timing can be seen from the following diagram of the Data Register (Fig.4.1.7)

etc.



#### 4.2 CALIBRATION

The audio parameters are read from RAM into the registers of the audio amplifier whenever the tape speed, the tape type, or the equalization standard is changed.

When new parameters are set with the UP/DOWN [21/22] key or via the serial interface, the stored parameters in the RAM and in the registers of the audio amplifiers are overwritten.

The audio parameters are also stored in an EEPROM when the machine is switched off. This nonvolatile memory retains the data also while the machine is switched off. The data are recopied into the RAM when the machine is switched on again.

If the data in the RAM are lost, all parameters are set to zero, i.e. all registers are closed.

#### 4.2.1 Introduction

#### General

The assumption is that the tape recorder to be calibrated has been mechanically adjusted specifications (particularly with respect to the tape tensions and the tape transport).

Before you start with the calibration of the tape recorder, clean and demagnetize the soundheads and the tape guidance elements.

The calibration of the tape recorder should always be performed in the following order:

#### REPRODUCE ALIGNMENTS:

#### Preferred studio tape speed:

- Level
- Azimuth alignment of the reproduce head gap (see note 1)
- Frequency response (see note 2)

#### All other tape speeds:

- Frequency response (see note 2)

Depending on the reference tape, minor deviations can occur between the different speeds. In this case the final azimuth alignment should be made with the preferred studio speed.

#### Note 2:

tape recorders Normally the studio calibrated with full-track reference tapes. Due to fringing, frequency response errors occur in and 2-channel machines at low stereo frequencies, i.e. the low frequencies appear to be overemphasized.

This measurement error does not occur on tapes with correct guard track width or when a recording with tape is made.

#### RECORD ALIGNMENTS

#### Preferred studio tape speed:

- Record level preadjustment
- Azimuth alignment of the record head gap (bias parameter at approximately the same value for both channels!)
- Record level
- Frequency response

#### All other tape speeds:

- Record level preadjustment
- Bias
- Record level
- Frequency response

#### SYNC REPRODUCTION

- Level
- Frequency response

#### 4.2.2 Level definition

Voltage level O dBu = 0.775 V

Also refer to Figs. 4.2.1 and 4.2.2

Voltage level O dBm = 0.775 V:

It is based on the voltage drop with an output of 1mW into any load resistance. Across a load of 600ohms, the voltage drops by 775 mV. This voltage has been defined (without reference to a load) as a voltage level of O dBm.

More correct is, however:

O dBu = 0.775 V: corresponds to the voltage of 775 mV without reference to a load resistance.

#### Line level

- The level that,

  appears on the output of a tape recorder when a tape with reference flux is reproduced.
- fed to the input of a tape recorder produces reference flux on the tape.

#### Voltage reference level:

CCIR designation for line level; this level produces an indication of O dB on a quasi peak program meter (PPM).

### Standard reference level (operating level):

Designation commonly used in the USA for the level flux of 250 nWb/m for a tape (for recording on high-quality tapes) or 200 nWb/m (for recording on standard tapes); this level gives a reading of 0 VU on a VU-meter.

#### Peak level:

Designation commonly used in the USA for a level that is 8 to 10 dB higher than the operating level. For reasons of simplicity, a peak level of +6 dB relative to the operating level (double the voltage value) is used for calibrating a tape recorder.

dB	Voltage	dB	Voltage
0	0,775V	0	775mV
+1	0,8697	-1	691mV
+2	0,975V	-2	615mV
+3	1,097	-3	548mV
+4	1,23V	-4	489mV
+5	1,387	-5	436mV
+6	1,55V	-6	388mV
+7	1,73V	-7	346mV
+8	1,957	-8	308mV
+9	2,187	-9	275mV
+10	2,457	-10	245mV
+11	2,757	-11	218mV
+12	3,087	-12	195mV
+13	3,467	-13	173mV
+14	3,887	-14	155mV
+15	4,360	-15	138mV
+16	4,897	-16	123mV
+17	5,487	-17	109mV
+18	6,157	-18	97,5mV
+19	6,91V	-19	87mV
+20	7,750	-20	77,5mV

Fig.4.2.1

#### IEC/CCIR-Alignment

-	Definition:	Line Level [dBm]	VU Meter Ind. [VU]
-	"Bezugspegel":	+6	+6

#### NAB-Alignment

Definition:	Line Level [dBm]	VU Meter Ind. [VU]
Oper. Level:	+4	0
"Peak Level":	+10	+6

#### 4.2.3 Equalizations

Equalization networks that correct the frequency response are installed in the record and reproduce path.

The attack points of the correction are referred to as the transition frequencies or the transition time constants (1 / 2  $\pi$  f) and have been standardized by various organizations (IEC, NAB, AES, CCIR).

Tape Speed	Transition Frequencies,LOW and HIGH (Transition Time Constants)							
	IEC-1968	NAB-1975						
9,53 cm/s	50Hz ; 1800Hz	50Hz ; 1800Hz	( )					
3,75 ips	(3180μs; 90μs)	(3180µs; 90µs)						
19,05 cm/s	OHz;2240Hz	50Hz;3150Hz	OHz;315OHz					
7,5 ips	(ω;70μs)	(3180μs;50μs)	(Φ;50μs)					
38,10 cm/s	OHz;450OHz	<b>50Hz</b> ;3150Hz	( )					
15 ips	(ω;35μs)	(3180μs;50μs)						
76,20 cm/s 30 ips	OHz;9000Hz (ω ;17,5μs)	AES 1971 OHz;9000Hz (ω ;17,5μs)	()					

Fig.4.2.1a

#### Magnetic reference flux, standard 4.2.4 calibration data

When a recording with reference flux is reproduced, line level is produced on the output of the tape recorder.

The following standard settings are made by the factory:

#### CCIR settings:

- Line voltage: 220 V
- Line frequency: 50 Hz
- Line level: + 6 dBu
- Reading of the VU-meter at line level: + 6 VU
- Load impedance: 10 kohm
- Tape type: AGFA PER 528

#### Tape flux with line level:

3,75	ips,	stereo:	400	nWb/m
3,75	ips,	mono:	250	nWb/m
7,5	ips,	stereo:	510	nWb/m
7,5	ips,	mono:	320	nWb/m
15	ips,	stereo:	510	nWb/m
15	ips,	mono:	320	nWb/m
30	ips,	stereo:	510	nWb/m
30	ins.	monos	320	nWb/m

#### NAB settings:

- Line voltage: 220 V
- Line frequency: 50 Hz
- Line level: + 4 dBu
- Reading of the VU-meter at line level: + 0 VU
- Load impedance: 10 kohm
- Type tape: Scotch 3M 226

#### Tape flux with line level:

for	mono	and	stereo:	3,75	ips	200	nWb/m
				7,5	ips	250	nWb/m
				15	ips	250	nWb/m
				30	ips	250	nWb/m

Until further notice the machines leaving factory will be calibrated to one of these standards.

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#### 4.2.5 Calibration tapes

Calibration tapes are used for aligning the reproduce path of tape recorders. They are generally magnetized across their full width. A separate tape is used for each tape speed.

#### IMPORTANT:

In order to prevent unintentional erasure of these costly tapes, all channels should be switched to SAFE (i.e. the READY keys [3]/42] are to be deselected so that the red LED is dark).

#### The reference tapes contain the following sections:

#### Level tone section:

Reference flux = 320 nWb/m for 7½, 15, and 30 ips; 250 nWb/m for 3 3/4 ips) produces line level in play mode on the output of the tape recorder.

The output level should be adjusted to the specified line level, while the approx. 60 to 180 sec. level tone section is being played.

NAB calibration tapes with a reference flux of 200 nWb/m produce an output level of  $-4~\rm dB$  relative to 320 nWb/m; CCIR calibration tapes with a reference flux of 320 nWb/m produce in stereo mode an output level of  $-4~\rm dB$  relative to the line level and 510 nWb/m.

Reference frequency: 333 Hz or 500 Hz at 3 3/4 ips; I kHz at 7½ to 30 ips (there are also NAB calibration tapes with 700 Hz reference frequency).

#### Level adjustment:

 If the tape recorder is to be calibrated with a different (usually higher) reference level, the reference flux difference is computed according to the following formula:

20 log[101 
$$\frac{\text{desired ref. flux.}}{\text{ref. flux. of tape}} = \frac{\text{Difference (dB)}}{\text{ref. flux. of tape}}$$

#### Example:

Reference flux on the tape = 200 nWb/m desired reference flux, e.g. for a tape with high dynamic range = 510 nWb/m.

Refer also to Fig.4.2.2

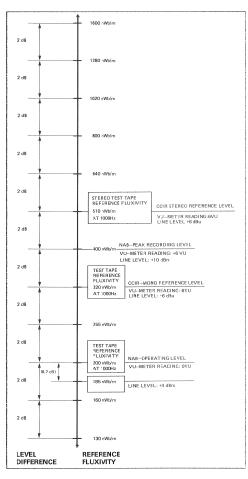


Fig.4.2.2

#### Azimuth alignment sections

Used for correcting the perpendicularity (azimuth alignment) of the reproduce head gap. This section comprises a shorter section with the reference frequency (for coarse adjustment) and a longer section with 10 kHz for fine-adjustment. NAB calibration tapes can be arranged differently. The level of this section is normally 10 dB below the reference level.

The alignment is made by means of the azimuth adjustment screw until the normal output voltage is achieved. In two-channel and stereo recorders, alignment to minimum phase difference between the two channels is possible with the aid of a 2-channel oscilloscope or an AF millivoltmeter with two inputs and summation.

#### Important:

If major adjustments on the reproduce head are made, additional voltage peaks occur, however with lower level!

If the reproduce amplifier operates with correct equalization, there is no difference between the reproduce levels of the reference frequency and the 10 (8; 16) kHz recording.

#### Frequency alignment section:

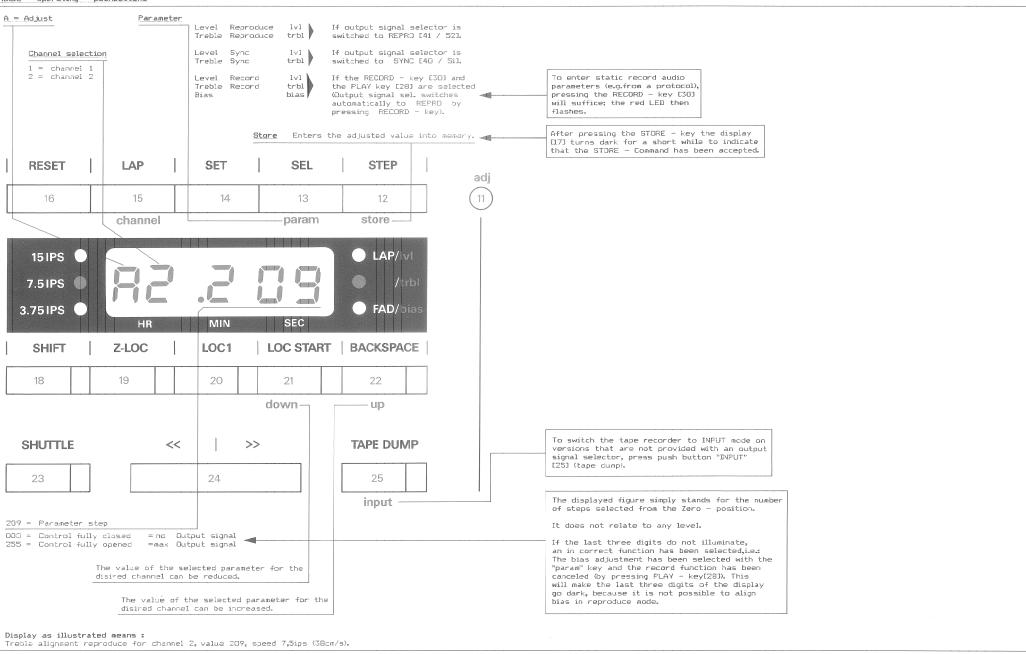
Used for determining and adjusting the operational reproduce frequency. NAB calibration tapes exist on which the frequencies differ from the following table.

Reference Tape		CCIR NAB			ı			
Tape-Speed [cm/s;ips]	9,5	19	38	76	3,75	7,5	15	30 AES
Rev.Lev.Sec.: Ref.Freq. Ref.Flux	315Hz		1kHz		500Hz	1kH;	:(700	Hz)
Density	257Hz	320	DnWb/	/m	200	20	OnWb.	/m
Azimuth Alignment Section: (-10dB)	315Hz 10kHz	1kHz 10kHz		250Hz 4kHz 8kHz		500(700)Hz 8kHz 16kHz		
Frequency Response Section: (CCIR:-20dB) (NAB :-10dB)	315Hz 31MHz 40 63 125 250 500 1kHz 2 4 6,3 8 10 12,5 14 16 315Hz	1kHz 31½Hz 40 63 125 250 500 1kHz 2 4 6,3		31½Hz 63 125 250 500 1kHz 2 4 5 6,3 8 10 500Hz		614Hz 63 125 250 500 1kHz 2 4 8 10 12,5 16 20 1kHz		

Fig.4.2.3

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Audio - Operating - pushbuttons



#### 4.2.6 Input keyboard

Keys with additional yellow lettering are dual function keys:

When the "adj" [11] key is pressed, these keys are assigned to the function specified by the yellow lettering. (In the preceding audio setup key summary, these functions are shown in red).

With these keys it is possible to perform all audio setups (except line level adjustment and RF circuit alignment) from the outside without any tools.

When the "adjust" [11] key is pressed, the display changes to:



The tape recorder is now prepared for adjusting the reference level based on a reproduce calibration tape.

If output function selector keys are available, it is possible to determine in play mode whether the reproduce channel or the sync reproduce channel (reproduce signal read from the record head) is to be adjusted.

READY	INPUT	SYNC	REPRO	and a second
31 [42]	32 [43]	40 [51]	41 [52]	

If the INPUT function is selected, the last three digits on the display disappear because the internal level cannot be adjusted to the external line level by means of the keyboard.

For alignment instructions refer to Section 4.2.8.

#### Note:

In "adjust mode" the output function selector keys for stereo channels 1 and 2 are switched in parallel, i.e. when the function key of one channel is pressed, the other channel switches automatically to the same function.

If, for example, the reproduce level for channel 1 is to be adjusted, the left-hand section of the display [17] should show A1, otherwise press the CHANNEL [15] key for this display. The reproduce level can only be changed if the lvl LED to the right of the display window glows; this state can be selected by pressing the PARAM [13] key. Of course, the output selector keys must be switched to REPRO [keys 41,52] for modifying the reproduce level.

#### Displaying the set value:

The amplifier gain can be adjusted between 0 and the maximum in 255 steps (corresponds to 256 discrete values).

These 256 values correspond to range between the minimum and the maximum setting of a potentiometer.

The adjusted value is displayed on the tape timer:

e.g. A1 .209

#### Important:

From the displayed figure (e.g. 209) the user can determine the range in which the corresponding amplifier operates. No conclusions concerning the actual voltage values can be drawn from this reading!

#### Modifying and storing the parameters:

Pressing the UP [22] key increases the gain, the DOWN [21] key decreases the gain.

Pressing UP or DOWN has the same effect as the clockwise or counterclockwise adjustment of a potentiometer.

The gain changes continually when the UP or DOWN key is held down.

The amplifiers immediately operate with the changed level (same as with conventional potentiometer settings).

In contrast to conventional potentiometers, the original value stored in the RAM can be retrieved at any time by pressing the "adj" [11] key.

When the desired value has been attained (e.g. operating level +10 dBu = 2.5 V), it can be stored in RAM by pressing the STORE [12] key; the display [17] turns dark for a brief moment and thus acknowledges that the setting has been stored.

#### Buffering the parameters

As soon as a value has been modified with the UP or DOWN key, the dot in front of the 3-digit number on the display [17] flashes to indicate that for the corresponding function the audio amplifier no longer works with the value stored in RAM but with the modified value.

The modified value is stored in a buffer and is retained even when the next adjustment is started before you have pressed the STORE [12] key. For example different bias and treble equalization values for linearizing the frequency response can be tried without losing the original values stored in RAM.

#### Important:

If new values are to be stored in the RAM, all modified setup functions must be selected individually and be stored separately by pressing the STORE [12] key.

#### Example:

Select treble adjustment (trbl) channel 1 and press STORE.

Select bias adjustment channel 1 and press STORE. Select treble adjustment channel 2 and press STORE. Select bias adjustment channel 2 and press STORE.

The value in the buffer memory is deleted when the STORE [12] is pressed.

When the "adj" [11] key is pressed, all parameters in the buffer memory are deleted and the original RAM values are reactivated!

For comparison purposes, the gain settings shown on the display can be recorded in a log.

#### (Example:)

A 8 Ser.No		pe S	peed				Remarks	
NA CC: Tape Tape	IR □ 2 A □ 2 B □	1	-		-		ips 0 Sips0	
Head Head		1	•		•	CH1	. 1	
Repro	Level Treble	200		14 M M	48.5		200	
Record	Level Treble Bias	80 IS IS 12 IS IS 16 IS IS		## C	549		4 4 5 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
Sync	Level Treble	2 E E		225	200	222	11.11	

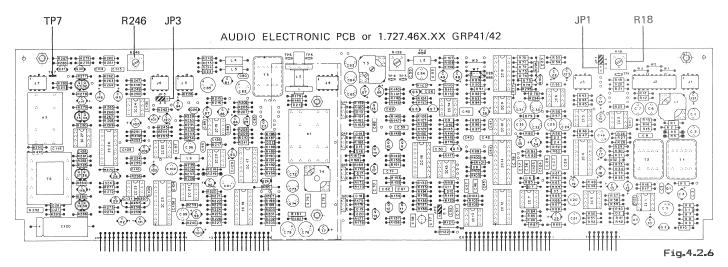
Fig.4.2.5

Two such logs are required for the complete documentation of a tape recorder if a different calibration was performed for NAB and CCIR (or for tape type A, type B; or reproduce head A, head B).

#### 4.2.7 Audio PCB layout

After the rear panel has been removed, the audio module can be pulled out by pressing the two locking springs marked with arrows.

In stereo models the circuit board facing the rear panel is for channel 1, the other is for channel 2. The following potentiometers and test points are needed for the following adjustment of the internal levels:



#### 4.2.8 Matching the internal level to the corresponding operating level

#### For record/reproduce models

#### Preparatory steps:

- Remove the rear panel
- Switch the machine to INPUT by pressing the keys F327431.

On models without INPUT key, actuate the microswitch "adj" [11] with a pointed instrument (pencil). (If disabled, change the setting of jumper JS 16 below the front panel!).

Press the TAPE DUMP [25] key in order to switch the machine to INPUT.

#### If existing:

- Switch all UNCAL keys [37, 50, 53, 57] to calibrated mode.
- Select LINE ON [37, 48] keys.
- Deselect MIC ON [35, 46] keys.
- Set MOND/STEREO [55] switch to stereo.

Connect the audio frequency generator to the line input to be calibrated (CH 1, CH 2) and feed 1 kHz with operating level (corresponds to input level for a recording of 0 VU).

This corresponds to the following standard values: CCIR 0,775 Veff ( O dBu) 1,23 Veff (+4 dBu) NAB

#### Note:

If the input sensitivity should be higher (e.g. for operation with hi-fi equipment), the setting of jumper JP 1 can be changed.

Position A: input sensitivity -4 to +12dBu (standard) Position **B:** input sensitivity -17 to -1dBu Position **C:** input sensitivity -30 to -14dBu

Adjustment procedure:

• On the AUDIO ELECTRONICS PCB 1.727.420/421 1.727.422/423/425 1.727.460/461/462 or 1.727.463/465/467 (GR41 or GR42), measure the 1 kHz signal on test point TP 7 of the channel to be calibrated and adjust the signal with the aid of R18 to 0.775 V (O dBu).

This value is identical for NAB and CCIR.

(Important: measure with high impedance, i.e. without termination resistor)

Connect the AF millivoltmeter to the output to be calibrated.

With the aid of R 246 adjust the output signal to the desired operating level.

This corresponds to the following standard values: 0,775 Veff ( 0 dBu) CCIR NAR 1,23 Veff (+4 dBu)

#### Note:

If the output level should be smaller (e.g. for operation with hi-fi equipment), the setting of jumper JP3 can be changed.

Position A: output level range -4 to +12dBu (standard)

Position **B:** -17 to -1 dBu

#### 4.2.9 VU - Meters

### (Not applicable to machines without VU-meters)

Pull off the MIC level knobs on the VU-meter panel (or the RECORD LEVEL knobs on the external VU-meter panel. The trimmer potentiometers on the COMMAND PANEL PCB 1.727.361/362/364/365 (GR30) or the external VU-meter panel PCB 1.727.925/935 thus become accessible.

Feed the same 1 kHz input level for an indication of 0 VU on the input as described in 4.2.8.

#### Adjustment procedure:

 With R16 (channel 1) and R46 (channel 2) adjust to a reading of 0 VU.

#### 4.2.10 LED peak indicator

### (Not applicable to machines without VU-meters)

The trimmer potentiometers for the LED peak meters become accessible after the line level knobs on the VU-meter panel or the REPR/SYNC LEVEL knobs on the external VU-meter panel have been removed.

Increase the input level by 6 dB according to Section 4.2.8.

Standard values for CCIR and NAB:

CCIR 1,55 Veff (+6 dBu) NAB 2,46 Veff (+10 dBu)

#### Adjustment procedure:

 Adjust R32 for channel 1 and R63 for channel 2 in such a way that the "+6" peak LED just lights up.

The peak program LEDs "+9" and "+12" cannot be adjusted. They follow automatically the setting of the "+6" LED.

#### Note:

In the VUK version these two potentiometers are numbered R18 and R48 respectively.

#### 4.2.11 PLAYBACK ONLY tape players

#### Alignment instructions for:

- Internal level
- External level
- VU and peak meter display

#### Preparatory steps:

- Actuate the "adj" [111 microswitch with the aid of a pointed tool (pencil). If it is disabled, change the setting of jumper JS16 below the front panel!
- Switch the UNCAL [53/57] keys for the output level potentiometer to the calibrated position. If existing: set the MONO/STEREO [55] switch to the stereo position.

## Level adjustments if the desired tape flux corresponds to the reference tape flux

Because the nominal (reference) flux and the nominal level according to NAB relate to the operating level, and for CCIR to the peak recording level, different adjustments result for NAB and CCIR as shown in the following table:

#### Adjustment procedure:

	NA	BO	CCIR		
Flux density	200	320	320	510	
from Testtape	nWb/m	nWb/m	nWb/m	nWb/m	
required	200	320	320	510	
Level	nWb/m	nWb/m	nWb/m	nWb/m	
1= internal	OdBu=	OdBu=	6dBu=	6dBu=	
Level (on TP7)	0,775V	O,775V	1,55V	1,55V	
2≡ external Level (on XLR)	4dBu= 1,23V ★	4dBu= 1,23V ★	6dBu= 1,55V ☆	6dBu= 1,55V ☆	
3: VU Meter	D	An	6	VU	
Indication	VU	D	VU	VU	

#### Fig.4.2.7

- ★+4 dBu corresponds to the standard operating level for NAB

○ NAB standard: 200 nWb/m = 0VU +4dBu operating level

● CCIR standard: 320 nWb/m = 6VU +6dBu peak recording level

- Mount the calibration tape, section: level tone
- Connect the AF millivoltmeter to test point TP 7 of the circuit board AUDIO CONTROL ELECTRONICS PCB 1.727.425 or 1.727.465.
- Start the recorder in play mode.

The internal level on TP 7 can be adjusted with the UP and DOWN keys [21,22] to OVU for NAB and +6dBu for CCIR (refer to Table 4.2.7 in 10)

#### Important:

After the correct value has been set with the UP and DOWN keys, it must be saved in memory by pressing the STORE [12] key.

Connect the AF millivoltmeter to the output to be measured and adjust the output signal to the desired line level by means of R246:

NAB to operating level / CCIR to peak recording level

#### Standard values:

for NAB +4dBu (1,23V) = operating level =**OVU** for CCIR +6dBu (1,55V) = peak rec. level =**6VU** 

(also refer to Table 4.2.7 under 2 external level)

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#### Note:

If the output level range should be smaller (e.g. for operation with hi-fi equipment), the position of jumper JP3 can be changed.(See Fig.4.2.6)

Position A: output level range -4 to +12 dBu (standard)

Position B: output level range -17 to -1 dBu

VU and peak meter adjustment for playback only tape players

#### Preparatory steps:

- Remove the front panel
- Same measurement arrangement as above
- Connect the AF millivoltmeter to the output to be measured and play the level tone section of the calibration tape:

The trimmer potentiometers R16, R46, R32, and R62 are located on the command panel PCB 1.727.364.00 or 1.727.365.00 respectively.

#### Adjustment procedure:

#### NAB:

- Adjust R16 for channel 1 and R46 for channel 2 to 0 VU (refer to Table 4.2.7 under 3. VU-meter reading).
- Activate the UNCAL [53,55] key and increase the output level of the channel to be measured by 6dB with the aid of the output level potentiometer [54,56]. (For NAB standard calibration this corresponds to a level of
- +10dBu (2.45 V) on the AF millivoltmeter).

  Adjust R32 for channel 1 and R63 for channel 2 in such a way that the "+6" peak LED just lights up.

#### CCIR:

- Adjust R32 for channel 1 and R63 for channel 2 in such a way that the "+6" peak LED just lights up.
- Activate the UNCAL [53,55] key and lower the output level of the channel to be measured by 6dB with the aid of the output level potentiometer [54,56]. (For CCIR standard calibration this corresponds to a level of 0 dBu (0.775 V) on the AF millivoltmeter).
- Adjust R16 for channel 1 and R46 for channel 2 to 0 VU. (See Table 4.2.7 under 3m VU-meter indication).

The peak program LEDs "+9" and "+12" cannot be adjusted. They automatically follow the setting of the "+6" LED.

Adjusting the level when the desired tape flux does not correspond to the one on the calibration tape

If the desired magnetic tape flux does not correspond to the one recorded on the calibration tape, the tape flux correction value (  $\Delta U$ ) must be determined.

The tape flux correction value (  $\Delta$  U) is positive when the desired tape flux is smaller than the one recorded on the calibration tape. Conversely, it is negative when the desired tape flux is greater than the one recorded on the calibration tape.

The tape flux correction value (  $\Delta U$ ) can be determined from Table **4.2.2**:

(e.g. desired tape flux 250 nWb/m Available calibration tape 200 nWb/m Tape flux correction value  $\Delta U = -2$  dB).

The tape flux correction value  $\Delta$  U computed according to Table 4.2.2 is to be added to or deducted from the values 10, 20, 30 in Table 4.2.7 (depending on the sign).

For the above example (NAB) this means:

- Internal level O dBu 2 dBu = -2 dBu
- External level 4 dBu 2 dBu = +2 dBu
- VU meter reading 0 VU 2 dBu = -2 VU

Other common settings can be determined from the table Fig.4.2.8 (all others can be computed with the aid of Table 4.2.2):

#### Adjustment procedure:

The adjustments are performed similarly to those described in 4.2.11 .

Play the level tone section of the calibration tape and aligne as follows:

- Internal level: set it to the computed value
- External level: desired line level + (-) tape flux correction value
- VU-meter: set it to the computed value.

#### Note:

If the value to be set is greater than the VUmeter reading (+3 VU) or much below the O VU mark, connect the millivoltmeter to the XLR output and adjust the gain with the output level trimmer potentiometers [54, 56] (enabled with the UNCAL keys [53,57]) in such a way that a O VU reading can be obtained (Refer to example 2.)

		CCI	IR.	NAB			
Test - Tape	320	320	510	510	185	200	320
	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m
required	510	640	320	640	250	320	250
flux density	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m	nWb/m
Tape flux	-4	- <b>6</b>	+4	-2	–3	– <b>4</b>	+2
correction value	dBu	dBu	dBu	dBu	<b>dB</b> u	dBu	dBu
internal Level	+2	0	+10	+4	–3	-4	+2
(on TP 7)	dBu	dBu	dBu	dBu	<b>d</b> Bu	dBu	dBu
external Level	+2	<b>O</b>	+10	+4	+1	O	+6
(on XLR)	dBu	dBu	dBu	dBu	dBu	dBu	dBu
VU Meter Indication	+2 VU	νυ 0	+10 VU <b>¥</b>	+4 VU <b>¥</b>	-3 VU	-4 VU <b>≭</b>	+2 VU

#### Peak LED

The Peak LED should light up at Peak-recording level (= 6dB above OVU).

Because the nominal-tapeflux for CCIR-tape recorders is related to the Peak-recording level (6VU), the calculated value of the external Line level (see Table 4.2.8) is also the treshold point of the "+6" Peak LFD.

The nominal-tapeflux for NAB-tape recorders is related to the operating level (OVU), i.e. add 6dB to the computed value of the external Line level to achieve the treshold point of the "+6" Peak LED.

#### Example 1:

NAB Testtape 185nWb/m Tapeflux correction required tapeflux 250nWb/m value -3dB Standard Line level +4dBu

VU-Meter indication -3VU corresponds to an external Line level of +1dBu.

Peak LED indication at (-3VU + 6dB = ) +3VU which corresponds to the external Line level of (+1dBu + 6dB = ) +7dBu.

Connect the millivoltmeter to the XLR output to be measured and increase the external level by 6dB with the aid of the output level trimmer potentiometers [54,56] (enabled with UNCAL keys [53, 57]). In the above example, increase the external level by 6dB to +7dBu.

Afterwards adjust potentiometer R32 for channel 1 on the command panel board (below frontpanel cover) and R62 for channel 2 in such a way that the "+6" Peak LED just lights up.

#### Example 2 :

#### Requirement:

32OnWb/m = 6VU = 6dBu line level Available calibration tape 51OnWb/m Standard Line level (external level) +6dBu

With the definition of 6VU we know that the 6dBu line level corresponds to peak recording level, i.e. the internal level is also at the peak value (6dB above OVU).

The tape flux correction value (computed according to Table 4.2.2) is +4dB.

Consequently, when the  $510 \, \text{NWb/m}$  calibration tape is played, the internal level on TP7 of the corresponding audio electronics board must be adjusted to (+6dBu standard Line level + 4dB flux correction value = )  $10 \, \text{dBu} = 2.45 \, \text{V}$  (by means of the UP [22] and DOWN [21] keys.

The external level is at +6 dBu + 4dBu = 10dBu.
 Adjustable with R246 on the corresponding audio electronics board.

The VU-meter reading should also be at 6VU + 4dB = 10VU.

Because this value is not adjustable, the level must be lowered by 10dB with the aid of the output level trimmer potentiometers [54, 56] (enabled with the UNCAL keys [53,57]).

The VU-meter is subsequently calibrated to OVU by means of R16 for CH1 and R46 for CH2 on the command panel PCB.

The peak LED is always lit at Peak recording level (6dB above OVU).

For this example, the Peak LED "+6" must light up with an external Line level of +10dBu. (Standard Line level 6dBu + 4dB tapeflux correction value).

Therefore release the UNCAL pushbuttons again into calibrate position and adjust the potentiometers R32 for channel 1 and R62 for channel 2 on the command panel PCB in such a way that the corresponding LED just lights up.

#### Note:

If no AF millivoltmeter with dB scale is available, the voltage values can be derived from Table 4.2.1.

#### 4.3 REPRODUCE ALIGNMENTS

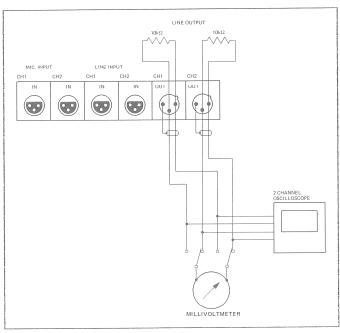


Fig.4.3.1

#### 4.3.1 PREPARATION

The alignment is performed with the aid of the front-panel keyboard. See Fig. 4.2.4.

Preparatory steps:

- Press the REPRO [41/52] key (only on models with output selector switches)
- Actuate the "adj" key (possibly interlocked with jumper 16 below the front cover). The following picture appears on the display [17]:



Select the preferred studio speed.

#### If existing:

- Select the READY [31/42] key (the red LED should not flash)
- Deselect all UNCAL [53/57] keys so that calibrated level can be set.
- Deselect Mono [55] by simultaneously pressing shift and mono.
- Set the programmable keys [60/61] to the desired calibration mode:
  - NAB or CCIR equalization
  - Tape type A or B (Tape A / Tape B)
  - Reproduce head left or right (HEAD A / HEAD B)
- Connect the AF millivoltmeter to the XLR output to be calibrated, possibly terminated with 200 or 600 ohm (factory termination 10 kohm).
- Mount the corresponding reproduce calibration tape and play the level tone section.

#### Adjustment procedure:

- Read the output level and set the desired operating level with the aid of the UP or DOWN [22/21] keys.
- Save the found value by pressing the STORE [12] kev.
- On stereo models connect the millivoltmeter to the line output channel 2. Press the channel [15] key for switching to channel 2 (display [17] shows A2 . XXX). Set the desired operating level with the UP or DOWN key. Press STORE.

The factory calibrates the machine to the following reference tape flux values:

for NAB calibration the internal level of 0.775V corresponds to OVU and to an operating level of 1.23V on the output of mono and stereo units.

at:	3.75	ips	200	nWb/m
	7.5	ips	250	nWb/m
	15	ips	250	nWb/m
	30	ips	250	nWb/m

For CCIR calibration a reference level of +6~dBu corresponds to 1.55 V at the output of mono and stereo units (VU-meter reading: 6VU).

			S	tereo	Mo	no
at:	3.75	ips	400	nWb/m	250	nWb/m
	7.5	ips	510	nWb/m	320	nWb/m
	15	ips	510	nWb/m	320	nWb/m
	30	ips	510	nWb/m	320	nWb/m

If the desired tape flux does not correspond to the one on the available calibration tape, the difference can be computed by means of the formula in paragraph 4.2.5 or be derived from the table (Fig.4.2.2).

#### Important:

If the desired magnetic flux is higher than on the available calibration tape, the value obtained from table 4.2.2 must be subtracted from the desired line level.

#### Example:

Desired setting 510  $nWb/m = +6 \ VU = 6 \ dBu \ line level.$ 

Available calibration tape: 320 nWb/m Difference  $\Delta U = 4 \text{ dB}$ 

The line level to be set is therefore: +6dB - 4dB = +2dB Indication: +2 VU

#### 4.3.2 Azimuth alignment

Spool the reproduce calibration tape forward to the azimuth alignment section.

The head gap is adjusted by swivelling the reproduce head. For this purpose the calibration tapes contain an azimuth alignment section that has been recorded with a tape flux that is down by 10dB (20dB).

The objective of the adjustment is to achieve the maximum output voltage at the head gap reference frequency (10 kHz on CCIR calibration tapes, 8 or 16kHz on NAB calibration tapes). The adjustment is most accurate when performed at the slowest speed.

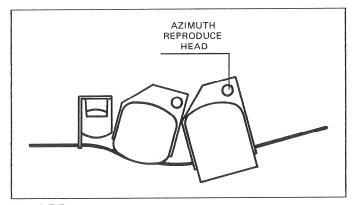


Fig. 4.3.2

#### Coarse adjustment:

While the recording with reference frequency is being played, adjust the reproduce head until the highest output voltage is achieved.

#### Fine-adjustment:

Connect the line outputs of both channels either

- to the inputs of a 2-channel oscilloscope. While a recording with 8, 10, or 16 kHz is being played, align for minimum phase difference of the output signals on the audio channels with the aid of the azimuth adjustment screw, or
- to the inputs of an AF millivoltmeter with summation facility. While the recording with 8, 10 or 16 kHz is being played, align for maximum level of the sum of the audio channels with the aid of the azimuth adjustment screw.

Minor deviations in the gap position can occur between the calibration tapes of different manufacturers or for different tape speeds. We therefore recommend to optimize for the most frequently used speed.

#### Important:

Always adjust for maximum level and then to minimum phase difference! If major adjustments are made to the reproduce head, other maxima but with lower levels can occur. Check: measure the phase with a slightly changed frequency.

#### Level check:

Rewind the calibration tape to the LEVEL TONE section and switch the machine to play mode. Check the level of channels 1 and 2. Correct it, if necessary.

#### 4.3.3 Reproduce treble adjustment

- Spool the calibration tape forward to the FREQUENCY RESPONSE 16 kHz section (applies to 30 ips; 14 kHz for 15 ips; 12.5 kHz for 7½ ips). The level of this section is approx. 20 dB (CCIR) lower than in the level tone section.
- Connect the millivoltmeter to the line output channel 1.
- Start the tape recorder in play mode.
- With the CHANNEL [15] key, select the channel to be calibrated (A1 .XXX appears on the display [17] for channel 1).

- Press the PARAM [13] key so that the red "lvl" LED on the right-hand side of the display [17] lights up.
- Alignment to optimum frequency response is possible with the UP and DOWN keys [21/22].
- Press STORE [12] to save the setting.

#### Note:

These frequencies are intended as reference points for matching the high frequencies to those of the line level. These are empirical values for which a more or less linear frequency response should result. The final setting should be made individually for each unit in such a way that when the entire frequency response test is played from tape, a linear, symmetrical pattern (deviation from the desired value identical in the positive and negative area) is obtained, regardless of the reference frequency.

On stereo machines connect the millivoltmeter to the line output channel 2. Press the CHANNEL [15] key, the display shows A2 .XXX. With the UP or DOWN key align for optimum frequency response. Press store.

#### Note:

#### Bass adjustment:

The A807 tape machine is not equipped with a bass trimmer potentiometer. Machines with serial numbers below 2141 are equipped with the audio electronics PCB 1.727.42X.00.

This circuit board has been matched to the deviations in the bass range caused by the various head formats.

If repairs become necessary and particularly if this circuit board is replaced, the different resistor configuration should be noted.

These resistors are socket mounted so that they can be easily replaced.

Resistor configuration for bass alignment of the 1.727.420/421/423/425.00 board:

Config.	R 195	R 197
2/2	560 kΩ	820 kΩ
0.75	1.5 ΜΩ	1.5 ΜΩ
MONO	not equipped	1.5 ΜΩ

Fig.4.3.3

Audio electronics boards with 1.727.460/461/462 1.727.463/465 and boards with 1.727.420/421/423.81 1.727.425.81 have been manufactured in such a way that bass alignment is not necessary.

#### Note:

If the optional test generator is installed, reproduce levels 10 or 20 dB below the reference level can be amplified in the 10 or 20dB setting by this amount so that they can again be adjusted to 0 VU with the aid of the VU-meter.

#### 4.4 RECORD ALIGNMENT

#### 4.4.1 Adjusting the erase current

- Mount a blank tape
- Press the ready keys [31/42], the red LEDs flash.
- Start the machine in record mode.

#### Adjustment procedure:

Turn R139 on the AUDIO ELECTRONICS PCB 1.727.420/421/422/423 or 1.727.460/461/462/463/467 (GR 41 or GR 42) to the minimum. (See Fig.4.4.1)

- Connect the oscilloscope or the vacuum tube voltmeter to TP 4 (O V to TP 2).
- With the trimmer T3 adjust the voltage on TP 4 to the minimum. A screwdriver with a narrow blade is needed for this purpose.
- Connect the voltmeter to TP 3 (0 V to TP 2) and adjust to the following values with the aid of R139:

2-Channel erase head **44 V** Mono erase head **75 V** 4-Track 2-channel erase head **36 V** 

#### Note:

- On 2-channel units with separate erase head, the adjustments must be performed on both channels.
- On 2-channel units with mono erase head, jumper W1 must be removed on the AUDIO ELECTRONICS PCB 1.727.400/401 (5R 40). In this case the adjustments for channel 2 are made on the AUDIO ELECTRONICS PCB 1.727.420/421/422/423/ or 1.727.460/461/462/ 463/467 (5R 42).

#### 4.4.2 Adjusting the bias trap

 Insert the tape and start the machine in record mode.

#### Adjustment procedure:

- Connect the vacuum-tube voltmeter to TP6 (OV to TP2) of the AUDIO ELECTRONICS PCB 1.727.420/421 1.727.422/423 or 1.727/460/461/462/463/467 (GR 41 or GR 42 respectively). (See Fig.4.4.1)
- With the trimmer screw on L3, adjust the voltage to the minimum; a screwdriver with a plastic blade is required for this purpose.

#### Note:

On all 2-channel machines, the channels must be aligned individually.

#### 4.4.3 Record audio alignments

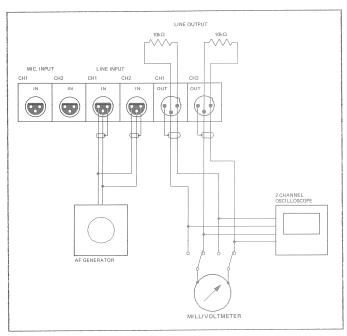


Fig.4.4.2

#### Preparatory steps:

 Actuate the "adj" key (possibly interlocked with jumper 16 below the front cover).

#### The display shows:



- With the CHANNEL [15] key, select the channel to be measured.A1 .XXX on the display [17] means channel 1.
- With the PARAM [13] key, select the "lvl" position; the "lvl" LED on the right-hand side of the display [17] lights up.

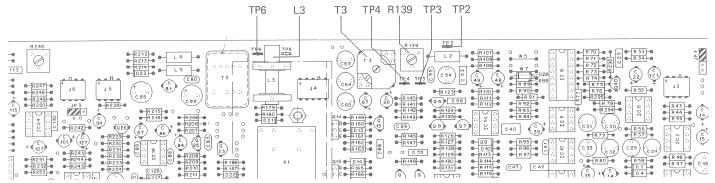


Fig.4.4.1

AUDIO ELECTRONICS or 1.727.42X.XX GRP41/42

#### If existing:

- Select the REPRO [41/52] key
- Release all UNCAL [39/50/53/57] keys to switch to calibrated level
- Deselect Mono (55)
- Select the LINE ON [37/48] keys
- Deselect the MIC ON [35/46] keys (the yellow LEDs should be dark)
- Press the READY [31/42] keys (the red LEDs flash)

Install a new or practically new tape of the desired type.

- With the keys [60/61]
  - -Select the correct equalization(NAB or CCIR), or -Select the correct tape type A or B, or
  - -Select the reproduce head (head A).
- Connect the AF generator with 1 kHz and operating level to the line input channel 1 (on stereo machines to channels 1 + 2), and connect the millivoltmeter to the line output of channel 1. For NAB calibration feed a reference frequency of 700 Hz.

#### 4.4.4 Record preadjustment

- With the PARAMETER [13] key select the level adjustment function, i.e. the "lvl" LED on the right-hand side of the display [17] should be light.
- With the CHANNEL [15] key, select the channel to be calibrated
  - (A1 .XXX = channel 1, A2 = channel 2)
- Start the machine in record mode.
- Read the output level and adjust to operating level by pressing the UP or DOWN [21/22] key.
- Press STORE [12].

On stereo machines connect the millivoltmeter to the line output channel 2. Press the CHANNEL [15] key (display shows A2). Adjust to operating level with the UP or DOWN key. Press STORE [12].

## 4.4.5 Aligning the azimuth of the record head

- Switch the audio generator to 10 kHz and decrease the level by 20 dB (or if available, set the test generator to the -20 dB position).
- Connect the millivoltmeter to the line output channel 1.
- Start the machine in record mode.

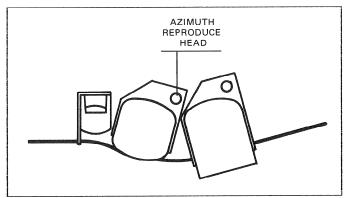


Fig.4.4.3

- With the azimuth alignment screw, adjust the position of the record head until the highest output voltage and simultaneously the lowest level fluctuations are attained.
- If major corrections are made with the azimuth alignment screw, the record preadjustment (Section 4.4.4) must be repeated.

#### Note:

If the bias has not been adjusted yet, the bias parameters of 2-channel and stereo machines should be set to the same or at least similar values for both channels, refer to 4.4.6. (Reason: the mechanical and the "electrical"

(Reason: the mechanical and the "electrical" head/gap of the record head are not in the same location; the offset depends on the magnitude of the bias current. For this reason an azimuth correction is made after the bias adjustment).

#### 4.4.6 Bias adjustment

- Audio generator at 10 kHz and level 20 dB below operating level. Connect the millivoltmeter to the line output channel 1.
- Start the machine in record mode
- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1)
- Press the PARAM [13] key repetitively until the red bias LED on the right-hand side of the display window [17] lights up.
  - (Note: only possible when the machine is in record mode).  $\footnote{\cite{Note: Note: No$
- Press the DOWN [21] key repetitively until the value A1 000 appears on the display. Then search the maximum output voltage with UP [22] and write down this value. Continue with UP until the output voltage drops by the value AU (dB) specified in the bias Table (at the end of this Section). This value depends on the tape type and the speed.
- Press STORE [12].

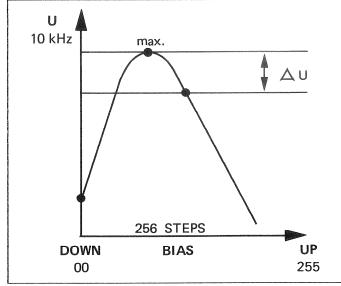


Fig.4.4.4

channel 1. Press STORE.

On stereo machines connect the millivoltmeter to the line output channel 2. Press the CHANNEL [15] key (A2 .XXX appears on the display [17]). Perform the bias adjustment as specified for

#### 4.4.7 Azimuth alignment STEREO

On stereo machines, the output signals on channels 1 and 2 are adjusted to minimum phase difference with the aid of the oscilloscope and by carefully turning the azimuth alignment screw of the record

#### 4.4.8 Record level adjustment

- Set audio generator at 1kHz (possibly 700Hz for NAB, 333Hz for 3 3/4 ips), and operating level.
- Connect the millivoltmeter to the line output channel 1.
- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1)
- Repetitively press the PARAM [13] key until the red "lvl" LED on the right-hand side of the display window [17] lights up.
- Start the machine in record mode.
- With the UP or DOWN [21/22] adjust the output level to operating level.
- Press STORE [12].

On Stereo machines connect the millivoltmeter the line output channel 2. Press CHANNEL [15] (A2 .XXX appears on the display [17]). With the UP or DOWN key adjust the output level to operating level. Press STORE.

#### 4.4.9 Frequency response alignment

- Set the AF generator to operating level -20 dB.
- Connect the millivoltmeter to the line output
- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1)
- Repetitively press the PARAM [13] key until the red "trbl" LED on the right-hand side of the display window [17] lights up.
- Start the machine in record mode. With the UP or DOWN [21/22] keys, align for optimum treble frequency response (above 1 kHz):

matching the The reference points for frequency to the reference level are specified in the following table. These are empirical values which produce a more or less linear frequency response.

Tape S	Speed	Adjusting Freq.
[cm/s]	[ips]	[kHz]
9,5	3,75	8
19	7,5	10
38	15	12,5
76	30	16

Fig.4.4.5

The final adjustment should be made individually for each machine in such a way, that with a continuous increase of the input frequency a symmetrical pattern (deviation from the value identical in the positive and the negative area) is attained, regardless of the above alignment frequencies.

Press the STORE kev [12]

#### Stereo models:

- Connect the millivoltmeter to the line output channel 2.
- Press the CHANNEL [15] key (A2 .XXX appears on the display).
- Start the machine in record mode.
- With the UP or DOWN key align to optimum treble frequency response (above 1 kHz).
- Press STORE.

#### 4.4.10 Adjusting the channel separation

(only on 2-channel and stereo machines)

- Connect the audio generator (operating level, 1kHz) to the line input channel 1;
- (preferably connect the millivoltmeter selective meter because the value is within the noise level) to the line output channel 2.
- Switch both channels to READY and start the machine in record mode.
- With the CROSSTALK potentiometer on the audio base board 1.727.400 or 1.727.401 (see Fig. 4.4.6), align for minimum output voltage. Repeat the same measurement with swapped channels. If large deviations occur, find an optimum value for both channels.

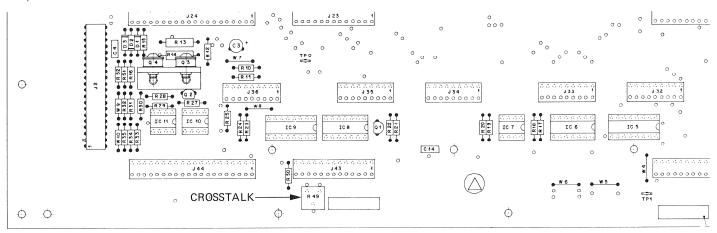


Fig.4.4.6

#### 4.5 SYNC ALIGNMENTS

#### 4.5.1 Preparations

- Connect the millivoltmeter to the line output channel 1.
- Switch on the tape recorder.
- Select the tape speed, equalization, tape type, and the corresponding reproduce head with the kevs [60/61].
- Deselect READY [31/42] (the red LEDs should not flash).
- Press the SYNC keys [40/51] of Ch 1 or Ch 2.
- Release all UNCALL keys [53/57] (cal. level).
- Mount a reference tape of the corresponding speed and spool forward to the LEVEL TONE SECTION.

#### 4.5.2 Sync reproduce level adjustment

- With the CHANNEL [15] key select the channel to be calibrated (A1 = channel 1).
- Repetitively press the PARAM [13] key until the red "lv1" LED on the right-hand side of the display window [17] lights up.
- Start the machine in play mode.
- Read the output level and adjust to operating level by pressing the UP or DOWN [21/22] key.
- Press STORE [12].

On stereo machines connect the millivoltmeter to the line output channel 2.

- Press the CHANNEL [15] key (the display shows A2 for channel 2).
- With the UP or DOWN key align to operating level.
- Press STORE .

#### 4.5.3 Sync frequency response alignment

- reference tape the forward to FREQUENCY RESPONSE section. The level of this section is approx. 20 dB below the level tone
- Connect the millivoltmeter to the line output channel 1.
- Press the CHANNEL [15] key so that A1(=channel 1) appears on the display.
- Repetitively press the PARAM key until the "trbl" LED on the right-hand side of the display window [17] lights up.
- Start the machine in play mode. With the UP or DOWN [21/22] key align for optimum frequency response.
- Press STORE [12].

On stereo machines connect the millivoltmeter to the line output channel 2.

- Press the CHANNEL [15] key (the display shows A2 for channel 2).
- With the UP or DOWN key align to optimum frequency response.
- Press STORE.

#### Note:

#### Bass-Sync:

There are no trimmer potentiometers for the bass frequencies.

Normally the studio tape recorders are calibrated with full-track reference tapes. Bass response errors occur on stereo and 2-channel machines due to fringing.

For this reason the sync reproduce frequency response for the bass frequencies should be checked with tape, i.e. the sync reproduce frequency response should be repeated with a user produced test tape, if no reference tapes with the correct guard track width are available (approx. 3 minutes each: 1 kHz (NAB 700 Hz), 10 kHz (8 kHz for 7½ ips) and 6 kHz for 3 3/4ips), 50 Hz.

minimize cross talk (considerable at frequencies) from the record channel into the SYNC reproduce channel, the frequency response has been limited. The following cutoff frequencies result:

3 3/4 ips 6 kHz; 7½ ips 10 kHz; 15 and 30 ips 12 kHz

### 4.6 MONO/STEREO SELECTOR SETTINGS

A mono/stereo selector switch is available as an option. In this case the mono level must be aligned. A precondition for this alignment is that the recorder has been correctly calibrated in stereo mode.

#### 4.6.1 Preparations

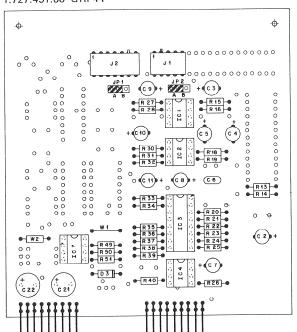
Set the jumper on the mono stereo switch to the desired setting.

The input amplifier can optionally be fitted with the test generator.

By setting the jumpers JS1 and JS2 on the mono/stereo input amplifier it is possible to define the channel that is to supply the mono signal to be recorded.

It is also possible to mix both input signals and to record them in mono mode.

## M/S INPUT AMPLIFIER 1.727.451.00 GRP44



M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44

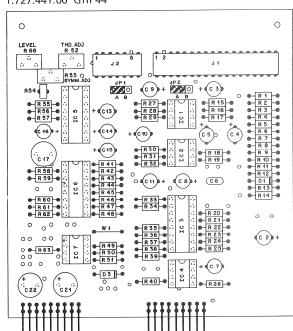


Fig.4.6.1

Jumper JP1 in position A Jumper JP2 in position A The input signal of channel 1 and the input signal of channel 2 are mixed. The resulting monophone signal is recorded on channel 1 and on channel 2.

Jumper JP1 in position A Jumper JP2 in position B The input signal of channel 1 is recorded on channel 1 and on channel 2.

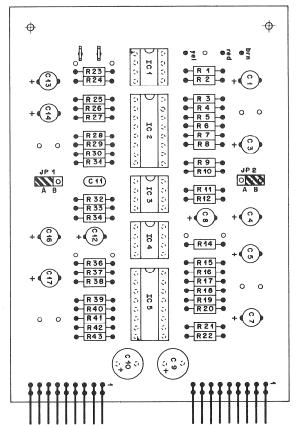
Jumper JP1 in position B Jumper JP2 in position A The input signal of channel 2 is recorded on channel 1 and on channel 2.

Jumper JP1 in position B
Jumper JP2 in position B

Both input signals are short-circuited to ground. No mono recording can be made.

By setting the jumpers JS1 and JS2 on mono/stereo output amplifier it is possible to define the channel on which the aggregate signal (mono signal) of the tape recording is available. It is also possible to make the signal available on both channels. (See Fig.4.6.2)

#### M/S OUTPUT AMPLIFIER WITH TEST GENERATOR 1.727.442.00 GRP45



Jumper JS2

M/S OUTPUT AMPLIFIER PBO 1.727.452.00 GRP45

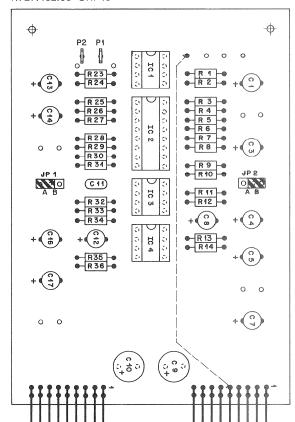


Fig.4.6.2

in position A in position A The aggregate signal of the reproduce channels 1,2 Jumper JS1 are available on the XLR output channels 1,2. Jumper JS2 in position A in position B The aggregate signal of the reproduce channels 1,2Jumper JS1 Jumper JS1 is only available on the XLR output channel 1. Jumper JS1 in position B in position A The aggregate signal of the reproduce channels 1,2 Jumper JS2 is only available on the XLR output channel 2. in position B in position B Jumper JS1 Both reproduce channels are short-circuited to

ground, i.e. the XLR outputs are muted.

### 4.6.2 Mono reproduce level adjustment

Prepare the recorder as follows:

• Select mono mode by simultaneously pressing the MONO [55] and the SHIFT [18] keys.

#### existing:

- Deselect all UNCAL keys [39,50,53,57] -> cal. level
- Press REPRO [41/52].
- Deselect the READY [31/42] keys.
- Select the desired equalization (NAB/CCIR) or the desired tape type (TAPE A / TAPE B) or the desired reproduce head (HEAD A / HEAD B).

#### Note:

Change over is only possible by simultaneously pressing the SHIFT [18] key and the corresponding key [60/61].

- Select the prefered studio speed.
- Mount the corresponding calibration tape.
- Unfasten the small cover plate on the right-hand side of the mono key by unfastening two hexagon-socket-head screws (2.5 mm).
- Connect the audio millivoltmeter to the output that supplies the mono signal.

#### Adjustments:

Play the level tone section of the reproduce calibration tape and adjust the desired mono tape flux by means of the R2 REPRO LEVEL potentiometer (below the small right-hand cover above the headphones socket). See Fig.4.6.3

For different Mono-flux setting use tape difference table 4.2.2.

For heads with 0.75 mm guard track, the MONO level can be adjusted to 1.1 dB below the standard mono level in order to compensate the quard track loss.

#### For example:

Calibration tape 320 nWb/m

Desired mono tape flux 320 nWb/m = 6VU = 6dBu

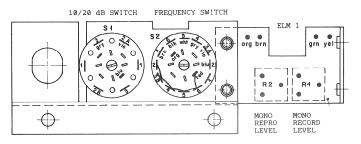
Mono level adjustment without compensation of the guard track loss:

Adjust R2 to line level, +6 dBu on the line output.

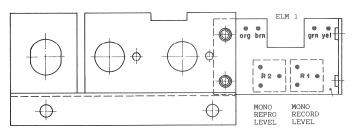
Mono level adjustments with compensation of the guard track loss:

Adjust R2 to the line level less the guard track loss value: i.e. to 6 dBu -1.1 dB = 4.9 dBu on the line output.

#### M/S ADJUSTMENT WITH TEST GENERATOR 1.727.443.00 GRP46



#### M/S ADJUSTMENT 1.727.453.00 GRP46



#### M/S ADJUSTMENT PBO 1.727.454.00 GRP46

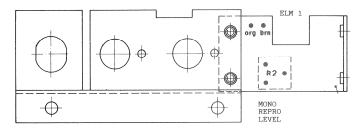


Fig.4.6.3

#### 4.6.3 Mono record level adjustment

 Connect the audio generator (1 kHz and line level according to the jumper configuration as shown in Fig. 4.6.1) to the corresponding line input.

If both channels are mixed to produce the mono signal, feed line level to both inputs.

- Mount a new or practically new tape.
- Press the READY keys [31/42] (the red LEDs flach)
- If the machine is equipped with the corresponding options, make sure that the HEAD A [61] is selected.
- The following key selections are identical to the sequence described 4.6.2

Adjustment procedure:

With the RECORD LEVEL trimmer R1 below the small cover above the headphones socket align to line level.

Important: measure with -20 dB!

### 4.7. BIAS - ADJUSTMENT PARAMETERS

#### ("Delta U" values)

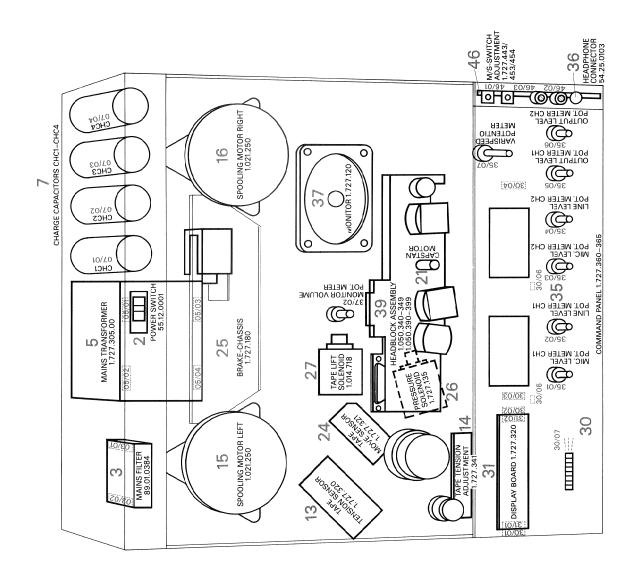
Tape speed Tape type	∆ U CdB3					
	9,5cm/s 3,75ips	19cm/s 7,5ips	38cm/s 15ips	76cm/s 30ips		
Agfa PEM 468	6	6	3,5	1,5		
Agfa PEM 469	7	7	5	2		
Agfa PER 525	6	6	3	American Marie Mar		
Agfa PEM 526		6	3			
Agfa PER 528	6	6	3,5	1,5		
Ampex 406	6	5	3	1,5		
Ampex 456 Grand Master	5	6,5	T. E.	des de la companyante del companyante de la comp		
Ampex 457	7	7	4	2		
Ampex 478	8	7		PART PART PART PART PART PART PART PART		
BASF LGR 30P	6	6	4	1,5		
BASF LGR 35P		4	Parties and the same of the sa	1,5		
BASF LGR 50P	6	6	4	1,5		
BASF LGR 51	6	6	4	2,5		
BASF SPR 50LH/50LHL	6	5,5	The state of the s	1,5		
BASF Studio Master 910	5	6	4,5	1,5		
BASF Studio Master 911	6	6	4,5	P)		
EMI 816/817	6	6,5	4	1,5		
Pyral CJ90	6	6,5	3,5	1,5		
Revox 641	6	5	4			
Scotch (3M) 206	5,5	5,5	3	1,5		
Scotch (3M) 226	6	6	3,5	1,5		
Scotch (3M) 250	5	6	3,5	1		
Scotch (3M) 256	6	6,5	3,5	1		
Scotch (3M) 263	6	6	3	1		

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SURVEY OF GROUPS (PART 1, FRONT-VIEW)

GRP, GRP/ELM DESIGNATION OF ASSEMBLIES



5/2

GRP, GRP/ELM DESIGNATION OF ASSEMBLIES SURVEY OF GROUPS (PART 2 REAR VIEW) SPOOLING MOTOR CONTROL 1.727.340 44/31 VOLTAGE SELECTOR 54.03.0128 60/01 4 [90/II] [<del>1</del>0/II] 40/22 6 RECTIFIER-BOARD 1.727.310 40
AUDIO CONTROL BOARD 1.727.400/401 10 TAPE DECK ELECTRONICS 1.727.350 PREAMPLIFIER FOR
2. REPROHEAD 1.727.430 DZ2 70.01.0231 CONNECTOR-PANEL 45/35 40/35 20/04 20 © CAPSTAN MOTOR CONTROL 1.727.330 DO/01 45/36 40/36 £0/01 10/01 10/07

#### WIRING LISTS

#### WIRING

STUDER

For equipment with complex electronics, wiring diadifficult to follow and can cause orams are misinterpretations. For this reason we have chosen a more reliable method based on automatically generated computer wiring lists. These provide comprehensive information on all electrical connections within the equipment.

For the sake of clarity, the power supply, the tape transport control system, and the audio section have been subdivided into groups (GRP) which in turn comprise elements (ELM) and connecting points (PNT).

The signals carry designations that have been constructed from various abbreviations and which identify their function.

#### 5.1.1 Groups

The electrical part of he A807 tape recorder has been subdivided into groups (GRPØ1...GRP92). These Groups are interconnected by cables and connectors that are identified with the corresponding group number. The group summary (foldout page at the beginning of this Section) illustrates the group allocation and the physical location within the unit.

#### 5.1.2 Elements, points

Groups that comprise several plug-in circuit boards or other elements, are subdivided into elements (ELM). The elements accommodate the connecting points (PNT).

#### 5.1.3 Principal connector types

Туре	Designation	STUDER-No.
A AA B BB	Connector, D-type, crimp: Contact pin, for thin stranded wires Contact pin, for thick stranded wires Contact pin, for thin stranded wires Contact sleeve, for thick stranded wires	54.02.0451 54.02.0455 54.02.0450 54.02.0454
C D	CIS-Connector: Contact sleeve Contact pin	54.01.0402 54.01.0401
F FF	MOLEX connector: Contact sleeve, for thin stranded wires Contact sleeve, for thick stranded wires	54.02.0412 54.02.0413
6	soldering pin	29.21.6002
Н	Stranded/solid wire, tin-coated (6 mm)	
I	Connector, D-type, crimp, contact pin	54.02.1112

Туре	Designation	STUDER No.
	Blad terminal AMP FASTON, crimp, 0,8 x 6,3 mm:	
JM	Connector sleeve, for thin stranded wires	54,02,0337
J	Connector sleeve, for thick stranded wires	54.02.0332
IJ	Connector sleeve, for very thick stranded wires	54.02.0338
К	Stranded/solid wire, skinned (8 mm), tin coated (1 mm)	
L	Stranded/solid wire, tin-coated (4 mm)	NOW AND A COST & COST OFF THE PARTY
М	MOLEX contact pin,	E3 40 4144
ММ	for thin stranded wires MOLEX contact pin	54.02.0411
MY	for thick stranded wires AMP blade terminal (blade)	54.02.0410 54.02.0344
N	CIS connector, contact pin	54.01.0225
0	Contact spring, for EU card edge connector	54.01.0376
Р	Card edge connector: Contact spring,	
	for thin stranded wires	54.06.4512
PP	Contact spring, for thick stranded wires	54.06.4510
Q	Female multipoint connector, contact sleeve	54.01.0451
R	Connector, D-type, crimp, contact sleeve	54.02.1111
S	Stranded/solid wire, skinned (4mm) and tin-coated	200 mm 0 mm 1 mm mm mm mm
Т	TERMI-POINT plug contact on WIRE WRAP pin	ant our B car one I core say our on
U UU	Detent solder contact, crimp Detent solder contact, crimp	54.03.0201 54.34.6002
٧	Connector sleeve, for thick stranded wires	54.02.0432
vv	Connector sleeve, for thin stranded wires	54.02.0432
W	Wrapped	,,
$\dashv$	Blad connector AMP FASTON, crimp,	
x	Ø,5 x 2,8 mm: Connector sleeve,	
	for thin stranded wires	54.02.0325
XX	Connector sleeve, for thick stranded wires	54.02.0329
	Blade connector AMP FASTON, crimp, 0,8 x 2,8 mm:	
Υ	Connector sleeve,	EA 60 6701
	for thin stranded wires Connector sleeve,	54.02.0326
YY	for thick stranded wires	54.02.0327

#### 5.1.4 Cable designations, color scheme

The most important connecting lines of the cabling are labelled. The wire ends carry three numbers which identify the group, the element, and the corresponding connecting point.

The flat-cable connectors have labels that specify

- Group and element numbers where the connector is plugged in, and either the
- name of the module into which the opposite end of the cable is plugged in, or the
  - name of the module into which the connector itself is plugged in.

#### Examples:

TAPE DECK ELECTRONICS, 6RP10, CIS connector ELMØ3. The conductors at this connector are black (0), green (5), red (2), and brown (1). The wires are labelled in this sequence as 10-3-1, 10-3-2, 10-3-3, and 10-3-5, i.e. the black wire is connected to contact 1 of element 03 of group 10, the green wire to contact 2, the red wire to contact 3, and the brown wire to contact 5 (contact 4 is the coding).

The apposite end, e.g. of the green conductor, is labelled as 24-1-5 which means that the wire is connected in group 24 (TAPE MOVE SENSOR) at element 1 to contact 5.

The labelling of the same CIS connector on the TAPE DECK ELECTRONICS, GRP20, ELM03 (connection to the TAPE MOVE SENSOR) is as follows:

GR 10 EL Ø3

The connector at the opposite end carries the designation:

GR 24 EL Ø1

#### Color scheme

	DI SCHEME	
Ø	black	(b1k)
1	brown	(brn)
2	red	(red)
3	orange	(org)
4	yellow	(yel)
5	green	(grn)
6	blue	(blu)
7	violet	(vio)
8	grey	(gry)
9	white	(wht)
	uncolored	(unc)

#### 5.1.5 Explanations to the LOCATION PIN

The LOCATION PIN LIST provides information on all connecting points and their signal names as well as the type of connection and if possible also the color of the connecting wire. This list is arranged by groups and contains all connecting points of a group, sorted by element number. However, it does not provide any information on the connections of an individual point. To trace the cable connection of a known signal name (on a certain group and the corresponding element), the SIGNAL WIRE LIST must be used.

If only the signal name is known, the SIGNAL WIRE LIST (paragraph 5.1.6) must again be used.

#### Example: (see LOCATION PIN LIST, page 8)

GRP		.727.350.2	20 CONTINUAT	r ION	<	GROUP
ELM	4 CONN. SERIAL	CTRL		JØ4	<	ELEMENT
PNT	SIGNAL NAME	COLOR LV	TYPE	F		
1 2	RCVDATA KEY	1	N			
3	+Ø.ØV	Ø	B			
4	+24V-RMT	8	В			
5	SN-DATA	2	В			
L,	signal na	ne	L connector	type		

Group:

GRP10. 1.727.350.20

TAPE DECK ELECTRONICS

#### Element:

ELMØ4 Serial remote control connectors (CIS)

Connection type: N CIS connector, contact pin

Connecting points: PNTØ1, PNTØ3, PNTØ4, and PNTØ5

Signal name: RCVDATA, +Ø.ØV, +24V-RMT, and SN-DATA

Colors: brown, black, grey, and red

## 5.1.6 Explanations to the SIGNAL WIRE LIST

The SIGNAL WIRE LIST provides information on which connecting points are linked to each other. It is principally used for explaining the connection of a signal found in the diagram to the corresponding assembly(ies). This list is arranged alphabetically by signal name. The alphabetic section is preceded by the signal names of the zero Volt points as well as the supply voltages.

The signal name can be found in the first column (SIGNAL NAME). The second column specifies the wire COLOR. The fourth column specifies the groups (GRP), elements (ELM), and connecting points at which the signal appears. This column is arranged by assembly number and does not provide any information on the signal path through the equipment.

#### Example: (see SIGNAL WIRE LIST, p.31)

SIGNAL NAME	COLUR	M 1	ASY GRP	ELM	PNI	S	LV	TYPE	DESCRIPTION OF ELEMENT
-15.0V	6		1	6	16			В	CONN. EXT. VU PANEL. CTL
	6		10	2	11			N	CONN. CAPSTAN CTL.
	6		10	6	19			N	CONN. SPOOLING MUTOR CTL.
	6		10	8	11			N	CONN. EXT. VU-PANEL
	6		10	9	15			N	CONN. CCMMAND PANEL
	6		10	10	15			N	CONN. AUDID CTL.
	6		11	- 2	3			N	CONN. TAPE TENS. SENSOR
	6		ii		10			N	CONN. TAPE DECK CTL.
	6		13	ī	4			N	CONN. SP. MOTOR CTL. JO2
	6		20	ĩ	10			N	CONN. TAPE DECK CTL.
	6		30	3	18			D	CONN. TAPE DECK CTL. J10
	6		40	1	13			N	CONN. TAPE DECK ELECTRONICS
			40	12	3			N	CONN. OPTION
			40	23	2			N	CONN. AUDIO ELECTRONICS CHI
			40	31	8			N	CONN. INSERT. INPUT CIRCUIT
			40	32	1			N	CONN. INSERT. INPUT CIRCUIT
			40	33	1			N	CONN. PREAMPLIFIER. SECOND RI
			40	36	6			N	CONN. INSERT. OUTPUT CIRCUIT
			40	43	2			N	CONN. AUDIO ELECTRONICS CH2
			41	13	2			N	CONN. AUDIO CTL. J23
			42	13	2			N	CONN. AUDIO CTL. J43
			43	33	1			N	CONN. AUDIO CTL, J33
			44	3.2	ï			N	CONN. AUDIO CTL. J32
			45	36	6			N	CONN. AUDIO CTL. J36
	6		92	1	10			N	CONN. VU PANEL, CTL
-20.0V	6		6		15	-		N	CONN. TAPE DECK ELECTRONICS
2000	6		10		4			č	CONNECTOR POWER SUPPLY
A-CTALK1			40	23	10	-		N	CONN. AUDIO ELECTRUNICS CHI
				13				N	CONN. AUDIO CTL. J23
A-CTALK2			40	43	10	-		N	CONN. AUDIO ELECTRONICS CH2
					10			N .	CONN. AUDIO CTL. J43

SIGNAL NAME: -15.0 V

COLOR: 6 blue (blu) or none (internal connection on the PCB).

TYPE of connection:

- B (Contact sleeve for thin stranded wires), or
- D (Contact pin), or
- N (CIS connector, contact pin)

Partial listing of the signal path:

GRP	ELM	PNT	
1 1Ø 1Ø 1Ø 1Ø 1Ø	Ø6 Ø2 Ø6 Ø8 Ø9 1Ø	11 19 11 15 15	Socket, VU PANEL CONTROL; CIS connector on TAPE DECK ELECTRONICS; CIS connector on auf SPOOLING MOTOR CONTROL
11	ø3	2	CIS connector on auf SPOOLING MOTOR CONTOL

All of the above connecting points carry the -15.0 V signal. However, this does not mean that the signal is actually wired in the listed sequence from point to point.

# 5.1.7 Explanation of the signal name abbreviations and their specifications

Signalnamen	Beschreibung	Spezifikation
Signal	Description	Specification
O-AUDIO	GROUND from AUDIO BOARD	0.0 V
O-MOTFL	GROUND to Motor Filter	0.0 V
O-MOVES	GROUND to Tape Move Sensor	0.0 V
O-MSPLY	GROUND to Motor Supply	0.0 V
O-TACH1	GROUND to Sp. Motor Tacho Left	0.0 V
O-TACH2	GROUND to Sp. Motor Tacho Right	0.0 V
O-TTA	GROUND to Tape Tension Adjustment	0.0 V
O-TTS	GROUND to Tape Tension Sensor	0.0 V
17VAC	Ctl. Voltage f. POWER ON/OFF Switch	
+0.0V	Zero Referency	0.0 V
+0.0VA	Zero Referency f. Audio Circuits	0.0 V
+0.0VD	Zero Referency f. Digital Circuits	0.0 V
+1.2V	Supply Voltage	
+15.0V	Supply Voltage	
+20.0V	DC Supply Voltage f. +15 V	
+24.0V	Supply Voltage	
+24V-RMT	DC Supply Voltage f. Remote Ctl.	
+48.0V	Supply Voltage f. Microphons	
+5.0V	Supply Voltage	
+5.0VA	Supply Voltage f. Analog Circuits	
+5.0VMF	Supply Voltage f. Motor Filter Ctl	•
+5.0VD	Supply Voltage f. Digital Circuits	
+5.6V	Supply Voltage	
+50.0V	Supply Voltage f. Motors	
+60.0V	DC Supply Voltage f. +48 V	
-15.0V	Supply Voltage	
-20.0V	DC Supply Voltage f15 V	

Signal	Description	Specification	
A-CTALK× A-DRVIN× A-DO	Audio, Crosstalk Compensation Audio, Driver Input Audio Ctl, Data for DACs	0.775 V @ 0 VU H-Aktiv	
A-D7 A-HFIN× A-LINA× A-LINB× A-LINS× A-LOUTA× A-LOUTB×	Audio, HF Signal Input Audio, Line Input A Audio, Line Input B Audio, Line Input Ground Audio, Line Output A Audio, Line Output B	2.0 V / 153,60 kH	łz
A-LOUTSx A-LSA A-LSAMPx A-LSB A-LVINAx A-LVINBx	Audio, Line Output Ground Audio, Loudspeaker Ampl. Output A Audio, Loudspeaker Ampl. Input Audio, Loudspeaker Ampl. Output B Audio, to Input Level Ctl. Pot. Audio, from Input Level Ctl. Pot.	0.775 V @ 0 VU	
A-LVINC× A-LVMIA× A-LVMIB× A-LVMIC×	Audio, Ground for Input Level Pot. Audio, to Mic Level Ctl. Pot. Audio, from Mic Level Ctr. Pot. Audio, Ground for Mic Level Pot.	13.6 mV @ 0 VU	
A-LVMONX A-LVOUAX A-LVOUBX A-LVOUCX	Audio, to Monitor Level Ctl. Pot. Audio, to Output Level Ctl. Pot. Audio, from Output Level Ctl. Pot. Audio, Ground for Output Level Pt.	0.775 V @ 0 VU 0.775 V @ 0 VU	
A-MIASC× A-MICSA× A-MICSB× A-MICSS×	Audio, Asym. Mic Input Ground Audio, Sym. Mic Input A Audio, Sym. Mic Input B Audio, Sym. Mic Input Ground		
A-MICSWX A-MONITX A-PHINX A-PHOUTX A-PHSWXX	Audio, MIC Input Switch Audio, Monitor Signal Audio, Phones Ampl. Input Audio, Phones Ampl. Output Audio, Phones Mode Switch	0.775 V @ 0 VU 0.775 V @ 0 VU	
A-PHTM× A-PREOU× A-RECIN× A-SECRP× A-TAPOU× A-VUMTR×	Audio, Phantom Powering Switch Audio, Preampl. Output Audio, Record Ampl. Input Audio, Second Repro Signal Audio, Tape Ampl. Output Audio, VU Meter Ampl.	0.775 V @ 0 VU 0.775 V @ 0 VU 0.160 V @ 0 VU 0.775 V @ 0 VU	/1kHz

Signal	Description	Specification
ACA-17N ACA-17P ACA-20 ACA-36 ACA-40 ACB-17N ACB-17P ACB-20 ACB-36	AC Voltage for -20 V AC Voltage for +20 V AC Voltage for +24 V AC Voltage for +48 V AC Voltage for +50 V AC Voltage for -20 V AC Voltage for +20 V AC Voltage for +24 V AC Voltage for +24 V AC Voltage for +48 V	
ACB-40	AC Voltage for +50 V	
ACC-17N ACC-17P ACC-20 ACC-36 ACC-40	Trafo Bridge Trafo Bridge Trafo Bridge Trafo Bridge Trafo Bridge	
AN-TTENS AS-CLK AS-DATA	Analog Signal, Tape Tension Audio Ser.Ctl, Data Clock Audio Ser.Ctl, Serial Data	4.0 V without Tape
AS-FAD AS-HFCLK AS-RESET	Loudspeaker Ampl. Ctl. Audio, CLK for HF Driver Audio Ctl. Reset	L @ FADER activ 307.20 kHz
AS-STRAB	Audio Ser.Ctl, Strobe (Latch EN) Audio Ser.Ctl,	H @ on
AS-WREN	Strobe and A/B Ctl. f DACs Audio Ser.Ctl, Write Enable	H @ on H @ on

Signal	Description	Specification
B-FAST B-MID B-SLOW BR-FADRY BR-FORW BR-LOCST BR-PLAY BR-REC BR-REW BR-STOP BR-VRSPD	LED, FAST SPEED LED, MIDDLE SPEED LED, SLOW SPEED Remote Control, LED """"""""""""""""""""""""""""""""""""	L @ on
C-BASS C-BIASX C-CALINX C-CALOUX C-CUEAT C-EQA C-EQB C-EQF C-EQN C-EQS C-EQN C-EQS C-ERAPUTX C-MICONA C-MICONA C-MONOB	Control, Bass switch @ FAST Control, Bias on Control, Calibrated Input Control, Calibrated Output Control, Signal Attenuation Control, Equalisation, A Control, Equalisation, B Control, Equalisation, Middle Control, Equalisation, Norm Control, Equalisation, Norm Control, Equalisation, Slow Control, Equalisation, Slow Control, Erase on Control, Input signal at output Control, Insert electronic Control, Microphon attenuator Control, Microphon input Control, Mono/Stereo Switch  Control, Sp. Motor Filter Control, Level switch @ NAB Control, Output line Control, Record relais Control, Reproduce Control, Second Head Control, Second Reproduce Control, Sel Sync Control, Uncalibrated input Control, Uncalibrated output  Charge Capacitor	+15V=ON, -15V=OFF H @ on command H @ on H @ on L @ on H @ on L @ on L @ on H @

Signal	Description	Specification
DS-CLK DS-DATA DS-ENDPL DS-ENLED	Display serial Ctl., CLOCK , DATA , ENABLE DPL , ENABLE LED	
ERAHH-x ERAHL-x, low EXT-CLK EXT-DATA EXT-D5 EXT-D6 EXT-D7 EXT-ENLD EXT-FAD	Erase Head, high  Extern Panel, CLOCK , DATA , Keyboard Matrix  , ENABLE LED , LS MUTE	40 V @ 153.6 kHz
F-ACA40 F-ACB40 F-LINE× FAD1 FAD2	AC Voltage f. + 50 V  Power line after fuse FADER START Signal 1 FADER START Signal 2	
GND	GROUND	
HALL1A HALL1B HALL2A HALL2B HALL3A HALL3B	Capstan Motor HALL Element " " " " " "	
IR-REFEX	INPUT, Ext. Referency f. Capstan	9600 Hz
K-BRAKE K-LIFT K-PRESS	Magnet, Brake Magnet, Tape lift Magnet, Tape press	L@on L@on L@on
LINE1 LINE2	Power Line 1 Power Line 2	

Signal	Description	Specification
MRX-Q10 MRX-Q11 MRX-Q12 MRX-Q13 MRX-Q14 MRX-Q15 MRX-Q16	Keyboard Matrix Colone	L @ on
MS-C76K MS-DIREN	Sp. Motor Ctl. SR. Clock DIR Ctl. Eneble	76 kHz L @ PLAY
MS-MVCLK MS-MVDIR MS-ON MS-PRESS MS-REFA MS-REFB	MOVE CLOCK MOVE DIRECTION Sp. Motor Ctl. ON Switch PLAY Mode Tape Tension Ref. Switch A B	L @ FORW L @ on H @ PLAY
MS-REW MS-SHUTL	Sp. Motor REW Ctl. Sp. Motor SHUTTLE Ctl.	H @ REW H @ SHUTTLE
MV-CLKx	Move Sensor Signal	16 Hz / 7.5 IPS
M1-R M1-S M1-T M1-TACHO M1-TSENS M2-R M2-REFAN M2-S M2-T M2-TACHO M2-TSENS M3-CLK M3-C76K M3-DATA M3-EN M3-R	Supply Motor, Pole R Pole S Pole T Tacho Signal Tacho Sensor Signal Take up Motor, Pole R Referency Voltage Pole S Pole T Tacho Signal Tacho Sensor Signal Capstan Motor Ctl, Clock Capstan Motor Ctl, Data Capstan Motor Ctl, Enable Ploe R	5 V @ Wind
M3-REFEX M3-S	Ctl, Ext. Referency , Pole S	9.6 kHz
M3-SYNC M3-T	, role 3 Ctl, Synchron , Pole T	H @ Sync
M3-TACHO M3-9600	Ctl, Tacho Signal Ctl, Ref. Frequency	600 Hz @ 7.5 IPS 9.6 kHz

Signal	Description	Specification
OR-CMCLK OR-MVCLK OR-MVDIR OR-SYENB	Synchronizer Port, Capstan Tacho Move Clock Move Direction Eneble	600 Hz @ 7.5 IPS 16 Hz @ 7.5 IPS H @ Forw.
PRIMW-x	Mains Trafo Primer Winding	
R-SHUTL × R-RECL VA R-RECL VB R-REPL VA R-REPL VB R-VRSPD RECHH-× RECHL-× REPHH-× REPHL-× RVCDATA	Shuttle Control Potmeter M/S Adjustment " " Varispeed Control Potmeter Record Head, High , Low Reproduce Head, High , Low	

Signal	Description		Spe	cification
S-LINE× S-TAPOUT S-TGATT S-TGINHI S-TGOFF S-TGO S-TG1K S-TG1ODB S-TG1OK S-TG1OK S-TG2ODB S-TG16K S-TG2ODB S-TG6O SF-LINE× SM-DO SM-D7 SN-DATA SR-FADRY SR-FORW SR-LIFT SR-LOCST SR-MUTE SR-PLAY SR-REC SR-RESET SR-REW SR-STOP SR-VRSPD	Power Line, switched Tape Out Switch Test Generator Command "" "" "" "" "" "" "" "" "" "" "" "" ""			on on on on on on
SR-ZLOC SRPHH-x SRPHL-x	ji		L @	on
TACHO-3x TRS-A TRS-C TRS-E TRS-K TTA-FORW TTA-LIBR TTA-PLAY TTA-REW TTA-SHT1 TTA-SHT2 TTA-SHT3	Capstan Tacho Tape Transparent Sensor,  Tape Tension Adjustment " " " " "	Anode Collector Emitter Kathode		
WR-BIAS× WR-REC× WR-REPR×	Write, Data for bias adju Write, Data for record ad Write, Data for repro ad	justment	L @	on on on

A G E 1 O F 53

DATE OF ORIGIN: 88/03/21 DATE OF PROC. : 88/06/09

GROUP NODE = #
INTER GROUP NODF = #
DIRECT WIRE TO # = <
WIRING NOT COMPUTED = a

S U M M A R Y

ASSEMBLYS 0
GROUPS 37
ELEMENTS 157
PINS (TOTAL) 1214
MULTIPLE PINS 0
CODING KEYS 61
SIGNALS 362

( UNUSED PINS 93 )

IGNALS 362 (UNUSED SIGNALS 25 )

RECURDS READ 1472

OPTIONS SPECIFIED: LOCLIS, SIGLIS, ALLCOL, WIRALL

OPTIONS USED : LOCLIS, SIGLIS, ALLCOL, WIRALL

====>> NO PUNCH GENERATED <<====

***	* * * * *	1.121.010.00	* STUDER A 807 * TAPE RECORDER ******************	******	******	U\88	3/21 - 01 ********	******	**** *****	****
ASY	GRP	PART NUMBER	DESCRIPTION	UNUSED PINS	USED PINS	TOT.PINS	MULT.PINS	COD.KEYS	TO T.FLM	REM
	1		CONNECTOR PANEL	23	109	132	0	4	15	
	2		POWER SWITCH	0	4	4	0	0	1	
	3	89.01.0384	MAINS FILTER	0	4	4	0	0	2	
	4	53.03.0128	VOLTAGE SELECTOR	0	8	8	0	0	1	
	5	1.727.305.00	MAINS TRANSFORMER	4	28	32	0	0	4	
	6	1.727.310.00	RECTIFIER BOARD	6	40	46	0	1	5	
	7		CHARGE CAPACITORS	0	8	8	0	0	4	
	8	70.01.0231	RECTIFIER DZ2	0	4	4	0	0	1	
	10		TAPE DECK ELECTRONICS	1	146	147	0	16	15	
	11	1.727.340.21	SPOOLING MOTOR CONTROL	0	58	58	. 0	6	9	
	12	1.727.342.00	SP. MOTOR FILTER	0	22	22	0	0	4	
	13	1.727.320.00	TAPE TENSION SENSOR	0	4	4	0	1	1	
	14	1.727.341.00	TAPE TENS. ADJUSTMENT	0	8	8	0	0	1	
	15	1.021.250.00	SPOOLING MOTOR, LEFT	0	3	3	0	0	1	
	16		SPOOLING MOTOR, RIGHT	0	3	3	0	0	1	
	17		SP. MOTOR TACHO, LEFT	0	3	3	0	0	1,	
	18		SP. MOTOR TACHO, RIGHT	0	3	3	0	0	1	
	20	1.727.330.24	CAPSTAN MOTOR CONTROL	0	32	32	0	4	5	
	21	1.021.605.00	CAPSTAN MOTOR	0	14	14	0	2	2	
	24	1.727.321.00	TAPE MOVE SENSOR	0	4	4	0	1	1	
	25	1.177.180.81	BRAKE CHASSIS	. 0	2	2	0	0	1	
	26	1.727.135.81	PRESS SOLENOID	0	2	2	0	0	1	
	27	1.014.718.00	TAPE LIFT SOLENOID	0	2	2	0	0	1	
	30	1.727.362.00	COMMAND PANEL	0	47	47	0	2	7	
	31	1.727.370.00	DISPLAY BOARD	0	8	8	0	0	2	
	35		LEVEL CONTROL PANEL	٥	21	21	٥	0	7	
	36	54.24.0103	PHONES CONNECTOR	0	5	5	0	0	1	
	37	1.727.120.00		0	14	14	0	0	2	
	39	1.050.341.00	HEAD BLOCK ASSEMBLY	1	24	25	0	0	1	
	40	1.727.400.00	AUDIO CONTROL BOARD	24	195	219	0	4	20	
	41	1.727.420.00	AUDIO ELECTRONICS CH1	0	88	88	0	7	11	
	42	1.727.420.00	AUDIO ELECTRONICS CH2	0	88	88	0	7	11	
	43	1.727.430.00	PREAMPLIFIER F. SECOND HEAD	12	12	24	0	1	3	
	44	1.727.441.00	MONO/STEREO SWITCH, INPUT AMPL.	10	31	41	0	2	4	
	45		MONO/STEREO SWITCH, OUTPUT AMPL.	4	20	24	0	0	4	
	46	1.727.443.00	MOND/STERED SWITCH, ADJUSTMENT	2	20	22	0	0	3	
	92	1.727.920.00	EXT. VU PANEL	6	37	43	0	3	2	

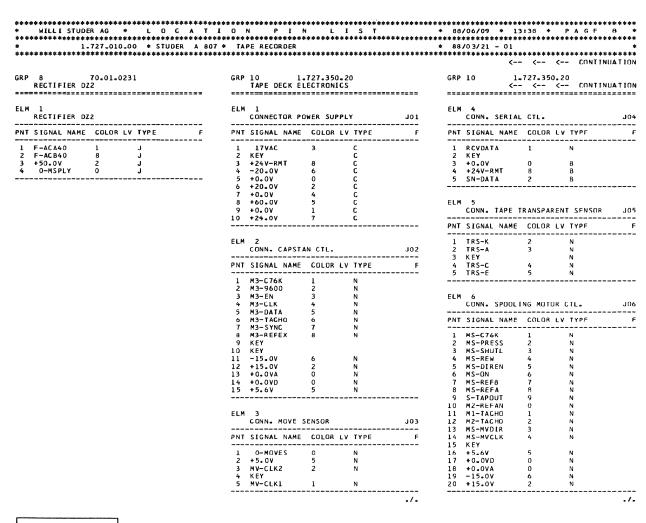
GRP	1 CONNECTOR PA	NEL	=======		GRP			< CONTIN			<	GRP 1 < < CONTINUAT						
ELM	1 CONNECTOR PO				ELM	4 PARALLEL REM	OTE CONI	NECTOR		ELM	5 CONN. SYNCHR	ONIZER						
	SIGNAL NAME	COLOR LV	TYPE	F		SIGNAL NAME	CULOR	LV TYPE	F		SIGNAL NAME							
1 2 3 4 5	LINE1 LINE2 GND LINE1 F-LINE1	1 6 5-4 1 1			1 2 3 4	+0.0V BR-REW BR-FORW BR-VRSPD SR-VRSPD SR-FADRY	8 3 2 6 4	B B B B		1 2 3 4 5	+0.0V BR-REW BR-FORW BR-VRSPD SR-VRSPD	8 3 2 6 4	B B B B					
ELM	2 CONN. GROUND				7 8 9	BR-LOCST BR-FADRY BR-REC	9 7 5	8 8 8		8 9	GR-MVCLK KEY BR-REC GR-MVDIR	5 5	B B					
	SIGNAL NAME	COLOR LV	T YP E	F 	11 12 13	FAD1	1 2 3 6	B B B		11 12 13	OR-CMCLK OR-SYENB IR-REFEX +0.0V	1 8 3	8 8 8					
	3 SERIAL CTL.	CUNNECTOR			16 17 18	BR-PLAY BR-STOP SR-LIFT SR-LOCST	1 4 7 6	8 B B		16 17	BR-PLAY BR-STOP SR-LIFT SR-MUTE	1 4 7 4	8 8 8 8					
1	SIGNAL NAME				20 21 22	SR-REC SR-REW SR-FORW SR-PLAY	3 1 0 9	B B B		20 21 22	SR-REC SR-REW SR-FORW SR-PLAY	3 1 0 9	8 8 8 8					
3 4 5 6	+24V-RMT	8	В		24 25	SR-STOP KEY +24V-RMT	0	В		24 25	SR-STOP KEY +24V-RMT	2 9 	В В					
7 8 9	RCVDATA +0.0V	1	8 8						./.					./				

*	1	.727.010	.00 * STUE	ER A 807	* TAI	PE RECORDER				* 88	/03/21 - 01 *******	************** - < < CN	******		
	1 <-		< CONTIN		GRP			< CONTI		GRP	<	- < < co			
ELM	6 CONN. EXT.				ELM		/U PANEL	Oldua .		ELM	4 10 CONN. LINE OUTPUT. CH1				
PNT	SIGNAL NAME	COLOR	LV TYPE	F	PNT	SIGNAL NAME	COLOR	LV TYPE		PNT	SIGNAL NAME	COLOR LV TYPF			
2 3 4	+0.0VD +5.6V +15.0V	0 5 2	B B B B		1 2 3 4	A-LVOUA1 A-LVOUC1 A-LVINB1 O-AUDIO	9 S 6 0	A A A A		1 2	A-LOUTS1 A-LOUTA1 A-LOUTB1	S 2			
	EXT-D6 EXT-D7	6 7	8 8 8		6 7	A-PHINI A-LSA A-LVOUAZ	8 6 9	A A		ELM	CONN. LINE I	INPUT. CH2			
11 12 13	EXT-DATA EXT-CLK EXT-ENLD	3 1 9	B B B B		9 10 11	A-LVOUC2 A-LVINB2 A-MONIT2	\$ 6 2	A A A A		1 2	SIGNAL NAME	COLOR LV TYPF			
15 16 17 18	+0.0VA -15.0V	6	B B B B		15 16 17	A-LVOUB1 A-LVINC1 A-LVINA1 A-PREOU1	6 S 9	A A A A		ELM	CONN. LINE I				
20			B B B B		20 21 22 23	A-LVOUB2 A-LVINC2 A-LVINA2	4 7 6 S	A A A A		1 2	A-LINS1	COLOR LV TYPF S 9 6			
24 25 			B 			KEY A-PREOU2	3	A 		ELM	CONN. MIC IN				
						CONN. XLR						COLOR LV TYPF			
					PNT	SIGNAL NAME	COLOR	LV TYPE	F	2	A-MICSS2 A-MICSA2 A-MICSB2	9			
						9 CONN. LINE C				ELM	14 CONN. MIC IN	PUT. CHI			
						SIGNAL NAME						COLOR LV TYPE			
					2	A-LOUTS2 A-LOUTA2 A-LOUTB2				1 2		S 9			

	******* I STUDE		******* L 0	**************************************	*****	**************************************	*******	******** I S T	*****		**************************************			*****
*	*******		******** 0 * STU	DER A 807	* TA	************* PE RECORDER	******	******	*******		**************************************	******	******	******
*********	*********			***************************************		••••					<-	- < <-	CONTIN	UATION
GRP 1	<	< <-	- CONTI	NOITAUN	GRP	2 POWER SWITCH		 )1		GRP	3 MAINS FILTE		34	
ELM 15 PHANT	OM POWER	RING SWIT	СН		ELM	1 POWER SWITCH	i			ELM	1 MAINS FILTE	R. INPUT		
PNT SIGNA	L NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAME	COLOR L	V TYPE	F	PNT	SIGNAL NAME	COLOR L	V TYPF	F
1 A-PHT 2 A-PHT 3 A-PHT	M2	0 8	L		2	F-LINE1 LINE2 S-LINE1	1 6	j J			S-LINE1 S-LINE2	1 6	) J	
3 4 1111						S-LINE2	6			ELM	Z MAINS FILTE	R. OUTPUT		
										PNT	SIGNAL NAME	COLOR L	V TYPF	F
											SF-LINE1 SF-LINE2	1	J J	

****	l. ******	******	*******	:R A 807	*****	PE RECORDER	******	******	*******	* 88	******	******	**************************************		
	4 VOLTAGE SELE	CTOR				5 1. MAINS TRANSF	ORMER				5 :	1.727.305	.00 < CONTI	OITAUNI	
	1 VOLTAGE SELE					1 PRIMARY 1			P01						
PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAM	COLOR	LV TYPF		
1 2 3 4A	SE-LINE2	6-8 3	1		1 2 3 4	PRIMW-1 SF-LINE1 PRIMW-3 PRIMW-4	1 2 3 4	Y Y Y		9 10	ACA-40 ACA-20 ACA-17N ACA-17P	0	L		
5 6 7	PRIMW-1 PRIMW-5	1 5 2-1	L L		ELM	2 PRIMARY 2 SIGNAL NAME				14 15	ACA-36 ACC-36	4	L L L		
					5 6 7	PRIMW-5 PRIMW-6 PRIMW-7 SF-LINE2	5 6 7	Y Y Y	F	20	ACC-20 ACC-40	7	L 		
					ELM	3 SECONDARY 1			Р03						
						SIGNAL NAME			 F						
					9 10 11 12 13 14 15 16	ACB-17P ACB-17N ACB-20 ACB-40	4 4 4 4 5 6								

				*****									- CONTINUA
	6 1. RECTIFIER BO	ARD		.=====	GRP ====		< <	CONTIN		GRP ===:	CHARGE CAPAC		
ELM	1 CONN. TRANSF				ELM	4 CONN. TAPE D			J04	ELM	1 CHARGE CAPAC		
	SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAME	COLOR L	V TYPE	F	PNT	SIGNAL NAME	COLOR LV	TYPF
2	464 20	1 3 2 9			1	+20.0V +60.0V 17VAC +24V-RMT				1 2	+50.0V 0-MSPLY	2 0	L L
5 6	ACB-40 ACB-40 KEY ACB-17N	9	N N		4 5 6 7	+24V-RMT	8	N		ELM	2 CHARGE CAPAC		
8	ACB-17P ACB-20	6	N N		8 9	+24.0V	7	N		PNT	SIGNAL NAME	COLOR LV	TYPF
1	ACB-36 ACA-40 ACA-40	5 0	N N		11	+24.0V +24.0V +24.0V	7 7 7	N N N		1 2	CHC2-P CHC2-N	7 8	r r
	ACA-36 	4			14 15	+24.0V +20.0V -20.0V +0.0V		N N N		ELM	3 CHARGE CAPAC		
	CONN. TO CHA		ITORS		17	+0.0V +0.0V	4	N N			SIGNAL NAME		
	SIGNAL NAME	COLOR LV	TYPE	F						1	CHC3-P CHC3-N	2	Ł
2	CHC2-N CHC3-N CHC4-P		N N N		E L M	5 CONN. RECTIF					4		
4	CHC2-P CHC3-P	4 7 2	N N		PNT	SIGNAL NAME					CHARGE CAPAC		
6	CHC4-N	6	N		11	F-ACB40 F-ACA40	1	Υ			SIGNAL NAME		
ELM	3										CHC4-P CHC4-N		
	SIGNAL NAME												
1 2	CHC4-P CHC3-N		N N										
	CHC2-N CHC4-N	8 6	N N N										



JDER A 807 * T	************* APE RECORDER		S T	*******	* 88 ***** * 88	/03/21 - 01 *******	3:38 * ( **********	P A G F ********	9 * ******
INUATION	<	· < <	- CONTIN			<	- < <	- CONTII	
J07	CONN. COMMAN					CONN. PARALL			
F PN	T SIGNAL NAME	COLOR LV	TYPE	F	PNT	SIGNAL NAME	COLOR LV	TYPF	F
1 2 3 4 5	SM-D7 SM-D6 SM-D5 SM-D4 SM-D3	1 2 3 4 5	N N N N		1 2 3 4 5	FAD1 FAD2 IR-REFEX KEY SR-FADRY		N N N	
7 8 J08 9 10	SM-D1 SM-D0 DS-DATA	7 8 9	N N N		7 8 9 10	SR-LIFT +0.0V SR-PLAY SR-FORW	6 7 8 9 0	N N N N	
12 13 14 15 16 17 18	KEY +15.0V -15.0V +0.0VA +5.6V +0.0VD	2 6 0 5	N N N N N N N		12 13 14 15 16	SR-STOP SR-REC SR-VRSPD SR-RESET SR-ZLOC	2 3 4 5	N N N N	
EL	M 10 CONN. AUDIO	CTL.		J10	PNT	CONN. PARALL SIGNAL NAME	COLOR LV	TYPF	F
	AS-FAD KEY AS-WREN AS-STRAB AS-STR AS-CLK AS-DATA AS-HFCLK AS-RESET +5.6V +0.0VD +48.0V +0.0VA +15.0V	1 3 4 5 6 7 8 9 5 0 7 0 2 6	N N N N N N N N N N N N N N N N N N N		2 3 4 5 6 7 8 9	BR-FORW BR-REW BR-STOP BR-RFC BR-VRSPD BR-FADRY BR-LOGST KEY +24V-RMT		2 N N N N N N N N N N N N N N N N N N N	•/•
	######################################	GRP 10 1.  INUATION	GRP 10 1.727.350.20  INUATION	GRP 10 1.727.350.20  < < CONTINUATION  ELM 5  CONN. COMMAND PANEL  F PNT SIGNAL NAME COLOR LV TYPE  1 SM-D7 1 N 2 SM-D6 2 N 3 SM-D5 3 N 4 SM-D4 4 N 5 SM-D3 5 N 6 SM-D2 6 N 7 SM-D1 7 N 8 SM-D0 8 N 7 SM-D1 7 N 8 SM-D0 1 N 9 DS-DATA 9 N 10 DS-CLK 9 N 11 DS-ENDPL 1 N 12 DS-ENLED 2 N 13 KEY 14 +15.0V 2 N 15 -15.0V 6 N 16 +0.0VA 0 N 17 +5.6V 5 N 18 +0.0VD 0 N  ELM 10 CUNN. AUDIO CTL.  PNT SIGNAL NAME COLOR LV TYPE  1 AS-FAD 2 KEY -/- 3 AS-HAREN 3 N 4 AS-STRAB 4 N 5 AS-STRAB 7 N 8 AS-HFCLK 8 N 9 AS-RESET 9 N 10 +5.6V 5 N 11 +0.0VD 0 N 12 +48.0V 7 N 13 +0.0VA 0 N 14 +15.0V 2 N	Section   Sect	GRP 10	SAP	C C C C C CONTINUATION   C C C C C C C C C C	CAPP   10

ELM 13 CC PNT S1 1 OF 2 KE 3 IF 4 SF 5 OF 6 OF 7 SF 8 + 0 9 SF 10 SF 11 SF 12 SF 13 SF 14 SF	3 DNN. SYNCHRI IGNAL NAME R-CMCLK	ONIZER A COLOR LV	CONTI	J13	ELM	SPOOLING MOT	ENS. ADJU	L ======= STMENT			<		- CONTIN	
ELM 13 CC PNT S1 1 OF 2 KE 3 IF 4 SF 5 OF 6 OF 7 SF 8 + 0 9 SF 10 SF 11 SF 12 SF 13 SF 14 SF	3 ONN. SYNCHRI IGNAL NAME R-CMCLK EY R-REFEX R-MUTE R-MVCLK R-MVDIR R-LIFT	ONIZER A COLOR LY 1 3 4 5	/ TYPE	J13 F	ELM PNT	1 CONN. TAPE T SIGNAL NAME	ENS. ADJU	STMENT			3			
1 OF 2 KE 3 IF 4 SF 6 OF 7 SF 8 +0 9 SF 11	IGNAL NAME	1 3 4 5	N TYPE	F	PNT	SIGNAL NAME								
1 OF 2 KE 3 IF 4 SF 5 OF 6 OF 7 SF 8 + (0 SF 11	R-CMCLK EY R-REFEX R-MUTE R-MVCLK R-MVDIR R-LIFT	1 3 4 5	N		1			TYPE	F	PNT	SIGNAL NAME	COLOR LV	TYPF	
12 SF 13 SF 14 SF	R-PLAY R-FORW	6 7 8 9 0	N N N N N		3 4 5 6 7 8	TTA-FORW	1 3 4 5 6 7	2		1 2 3 4 5 6 7 8 9	MS-PRESS MS-MVCLK S-TAPOUT KEY MS-MVDIR MS-C76K M2-TACHO M1-TACHO MS-REFA -15*0V	2 4 9 3 1 2 1 8 6	N N N N N N N N N N N N N N N N N N N	
	R-REW R-STOP R-REC R-VRSPD O.OV	1 2 3 4 5	N N N N			2 CONN. TAPE T SIGNAL NAME	COLOR LV	TYPE		12 13 14 15	MS-REFB +0.0VA MS-DIREN M2-REFAN MS-ON	7 0 5 0 6	N N N N	
	ONN. SYNCHR				1 2 3 4	O-TTS KEY -15.0V AN-TTENS	0 6 9	N N N		17 18 19	+15.0V MS-REW +0.0VD +5.6V MS-SHUTL	2 4 0 5 3	N N N N	
1 BF 2 BF 3 BF	IGNAL NAME R-PLAY R-FORW R-REW R-STOP		V 14PE  N N N	F 		+15.0V			./.		4 CONN. SP. MO SIGNAL NAME			
5 BF 6 BF 7 KF 8 QF 9 +2	R-REC R-VRSPD	5 6 8 9	N N N N							1 2 3 4	0-TACH2 +5.0V KEY M2-TSENS	0 5	N N	
	ONN. GROUND									ELM	CONN. SP. MO			
PNT S	IGNAL NAME	COLOR L	/ TYPE	F						PNT	SIGNAL NAME	COLOR LV	TYPF	1
1 G			Y							1 2 3	O-TACH1 KEY +5.0V M1-TSENS	0 5	N N N	

*	**************************************	DER A 807 * T	APE RECERDER			* 88	1/03/21 - 01		1
GRP	11 1.727.340.20 < < CONTIN	GR JUATION	P 12 1. SP. MOTOR FI	727.342.00		GRP	13 1. TAPE TENSION	- < < CONTI	INUATIO
FIM	6 CONN. SHUTTLE CTL.	FI	M 1			FIM	I 1 CONN. SP. MC	OTOR CTL+ JO2	
PNT	SIGNAL NAME COLOR LV TYPE	F PN	T SIGNAL NAME	COLOR LV TYPE	F	PNT	SIGNAL NAME	COLOR LV TYPE	1
1 2 3 4	R-SHUTL1 1 N R-SHUTL2 2 N KEY R-SHUTL3 3 N	1 2 3 4 5	0-M0TFL M1-R M1-R M1-S M1-S +5.0VMF	N N N N		1 2 3 4 5	0-TTS KFY +15.0V -15.0V AN-TTENS	2 N 6 N 9 N	
	CONN. SP. MOTOR FILTER, LEFT	J07 8	C-MOTFLT	N N					
PNT	SIGNAL NAME COLOR LV TYPE	F							
2	0-M0TFL N N 1-R N N N N N			TOR CTL.					
4	M1-S N N N N	PN	T SIGNAL NAME	COLOR LV TYPE	F				
7 8	+5.0VMF N C-MOTFLT N M1-T N M1-T N	2	M2-R M2-R M2-S M2-S	N N N					
ELM	8 CONN. SP. MOTOR FILTER, RIGHT	5 6 7 J08	M2-T M2-T 0-M0TFL	N N N					
	SIGNAL NAME COLOR LV TYPE	F EL	M 3 CONN. SP. MC	TOR LEFT	J01				
2	M2-R N M2-R N M2-S N	PN 	T SIGNAL NAME	COLOR LV TYPE	F				
4 5 6 7	M2-S N M2-T N M2-T N O-M0TFL N		M1-R M1-S M1-T	2 9 6					
ELM	9 CONN. SP. MOTOR SUPPLY,	EL		TOR RIGHT					
	SIGNAL NAME COLOR LV TYPE	PN F	T SIGNAL NAME	COLOR LV TYPE	F				
	+50.0V 2 Y 0-MSPLY 0 Y	1 2 3	M2-R M2-S M2-T	2 9 6					

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***	WILLI STUDE	K AG *	****	0 C	A 1	1 1	0	N P I	N ++++++	LISI				/06/09 *					*
*	l.					307 *	TA	PE RECORDER	******	******			* 88	******** /03/21 -	01		****	******	****
			*****	*****				**********	******			*****	****	******	*****	*****	C	ONTINUA	TION
GRP	14 1. TAPE TENS. A				GRP	15 SPOOLING M				± ± ±	GRP	16 SPOOL ING				======			
ELM	1 CONN. SP. MO	TOR CTL,	J01				ELM	1 CONN. SP.	MOTOR F	ILTER, JO	l		ELM	1 CONN. SP	. MOTI	DR FILT	ER. J	01	
PNT	SIGNAL NAME	COLOR LV	TYPE		F		PNT	SIGNAL NAM	E COLO	R LV TYPE		F	PNT	SIGNAL N	AME (	COLOR L	V TYP	F	F
1	TTA-SHT1	7	N				1	M1-R	2				1	M2-R		 2			
2	TTA-SHT2	8	N				2	M1-S	9							9			
3	TTA-SHT3	9	N				3	M1-T	6					M2-T		6			
4	TTA-LIBR	3	N																
6	TTA-REW	5	N																
8	TTA-FORW	6	N																
10	TTA-PLAY	4	N																
11	O-TTA																		

GRP 17 1.727.315.00	GKP 18 1.727.316.00 SP. MOTOR TACHO, RIGHT	< < CONTINUATION  GRP 20 1.727.330.20  CAPSTAN MOTOR CONTROL
SP. MOTOR TACHO, LEFT		
LM 1 CONN. SP. MOTUR CTL. JO5	ELM 1 CONN. SP. MOTOR CTL. JO4	ELM 1 CONN. TAPE DECK CTL. JO
NT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	DAT CICNAL NAME COLOD LY TYPE
1 0-TACH1 0 N	1 0-TACH2 0 N 2 +5∗0V 5 N 3 M2-TSENS 4 N	1 M3-CLK 4 N 2 M3-DATA 5 N 3 M3-EN 3 N 4 M3-C76K 1 N 5 M3-SYNC 7 N 6 +5.6V 5 N 7 +0.0VD 0 N 8 +15.0V 2 N
2 +5.0V 5 N 3 M1-TSENS 4 N	3 M2-TSENS 4 N	3 M3-EN 3 N 4 M3-C76K 1 N
		5 M3-SYNC 7 N 6 +5-6V 5 N 7 +0-0VD 0 N
		8 +15.0V 2 N 9 +0.0VA 0 N 10 -15.0V 6 N
		11 KEY
		12 M3-9600 2 N 13 M3-REFEX 8 N
		14 M3-TACHO 6 N
		ELM 2 CONN. VARI SPEED CTL. JO.
		PNT SIGNAL NAME COLOR LY TYPF
		1 +0-0V 0 N
		2 KEY 3 R-VRSPD 8 N 4 +15.0V 2 N
		4 +15.0V 2 N
		ELM 3 CONN. CAPSTAN TACHO JO:
		PNT SIGNAL NAME COLOR LV TYPF
		1 TACHO-3A 1 N 2 TACHO-3B 9 N
		5 HALLIB 8 N 6 HALLIA 5 N
		7 HALL2B 6 N 8 HALL3A 3 N 9 HALL3B 4 N 10 +0-0V 0 N 11 +1-2V 2 N 12 CAP-GRD
		9 HALL3B 4 N 10 +0.0V 0 N
		11 +1.2V 2 N
WILLI STUDER AG * L O C A T ***********************************	**************************************	**************************************
HILLI STUDER AG	I O N P I N L I S T ***********************************	**************************************
######################################	I O N P I N L I S T ***********************************	**************************************
######################################	I O N P I N L I S T  **********************************	**************************************
######################################	I O N P I N L I S T  **********************************	**************************************
######################################	I O N P I N L I S T  7 * TAPE RECORDER  6RP 21	**************************************
######################################	I O N P I N L I S T  7 * TAPE RECORDER  GRP 21	**************************************
######################################	I O N P I N L I S T ***********************************	**************************************
######################################	I O N P I N L I S T  7 * TAPE RECORDER  6RP 21	**************************************
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### ##################################	I O N P I N L I S T  **********************************	**************************************
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######################################	I O N P I N L I S T  **********************************	**************************************
## WILLI STUDER AG * L O C A T  ##################################	I O N P I N L I S T  **********************************	**************************************
######################################	I O N P I N L I S T  7 * TAPE RECORDER  **********************************	**************************************
######################################	I O N P I N L I S T  7 * TAPE RECORDER  6RP 21	**************************************
######################################	TO N P I N L I S T  TAPE RECORDER  TAPE RECORDER  TAPE RECORDER  TO N P I N L I S T  TAPE RECORDER  TO N CAPSTAN CTL, J04  PNT SIGNAL NAME COLOR LV TYPE F  THE NAME OF N N N N N N N N N N N N N N N N N N	**************************************

* 1.727.010.00 * STUDER A 8	07 * TAPE RECORDER ***********************************	* 88/03/21 - 01 ************************************
GRP 30 1-727-362-00 COMMAND PANEL	GRP 30 1.727.362.00 < < CONTINUATION	GRP 31 1.727.370.00 DISPLAY BOARD
ELM 1 CONN. SPEED INDICATORS	ELM 4 CONN. KEYS MATRIX	ELM 1 CONN. COMMAND PANEL JO1
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF
1 B-FAST N	1 +5.6V N	1 B-FAST N
2 B-MID N 3 B-SLOW N	2 SM-D7 N 3 SM-D6 N	3 B-SLOW N
	4 SM-D5 N 5 SM-D4 N	
ELM 2 CONN. DISPLAY EL.	6 SM-D3 N 7 SM-D2 N	ELM 2 CONN. COMMAND PANEL JO2
PNT SIGNAL NAME COLOR LV TYPE F	8 SM-D1 N 9 SM-D0 N 10 MRX-Q14 N	PNT SIGNAL NAME COLOR LV TYPF
1 +0.0VD N 2 DS-ENDPL N	11 MRX-Q10 N 12 MRX-Q13 N	1 +0.0VD N 2 DS-ENDPL N
3 DS-CLK N 4 DS-DATA N	13 KEY N 14 +0.0VD N	3 DS-CLK N 4 DS-DATA N
5 +5.6V N	15 MRX-Q12 N 16 MRX-Q16 N	5 +5.6V N
ELM 3	17 MRX-Q11 N 18 MRX-Q15 N	
CONN. TAPE DECK CTL. J10		
PNT SIGNAL NAME COLOR LV TYPF F	FLM 5 CONN. VU-INPUT CH1	
1 +5.6V 5 D 2 SM-D7 1 D	PNT SIGNAL NAME COLOR LV TYPE F	
3 SM-D6 2 D 4 SM-D5 3 D	1 A-VUMTR1 1 Y	
5 SM-D4 4 D 6 SM-D3 5 D		
7 SM-D2 6 D 8 SM-D1 7 D	ELM 6 CONN. VU-INPUT CH2	
9 SM-DO 8 D	PNT SIGNAL NAME COLOR LV TYPE F	
11 KEY D 12 DS-ENDPL 1 D	1 A-VUMTR2 1 Y	
13 DS-ENLED 2 D 14 DS-DATA 9 D 15 DS-CLK 9 D	ELM 7	
15 DS-CLK 9 D 16 +15.0V 2 D 17 +0.0VA 0 D	SHUTTLE POTMETER	
18 -15.0V 6 D	PNT SIGNAL NAME COLOR LV TYPE F	
./.	1 R-SHUTL1 1 L 2 R-SHUTL2 2 L	
	3 R-SHUTL3 3 L	
**************************************	I O N P I N L I S T ***********************************	* 88/03/21 - 01 ************************************
LEVEL CONTROL PANEL	< < CONTINUATION	GRP 36 54.24.0103 PHONES CONNECTOR
ELM 1 MIC LEVEL POTM. CH1	ELM 6 OUTPUT LEVEL POTM. CH2	ELM 1
PNT SIGNAL NAME COLOR LV TYPE F	*********	CONN. HEAD PHONES  PNT SIGNAL NAME COLOR LV TYPF F
1 A-LVMIC1 0 L	1 A-LVGUC2 O Ł	1 +0-0VA 0 I
2 A-LVMIB1 6 L 3 A-LVMIA1 9 L	2 A-LVCUB2 6 L 3 A-LVCUB2 9 L	2 A-LSAMP2 3 L 3 A-PHOUT2 2 L 4 A-PHOUT1 1 L 5 A-LSAMP1 8 L
		4 A-PHOUT1 1 L 5 A-LSAMP1 8 L
ELM 2 LINE LEVEL POTM. CH1	ELM 7 VARIO SPEED POTM.	
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	
1 A-LVINC1 0 1 2 A-LVINB1 2 L 3 A-LVINA1 9 L	1 +0.0V 0 L 2 R-VRSPD 8 L 3 +15.0V 2 L	
3 A-LVINA1 9 L	3 +15.0V 2 L	
ELM 3		
MIC LEVEL POTM. CH2		
PNT SIGNAL NAME COLOR LV TYPE F		
1 A-LVMIC2 0 L 2 A-LVMIB2 6 L 3 A-LVMIA2 9 L		
ELM 4 LINE LEVEL POTM. CH2		
PNT SIGNAL NAME COLOR LV TYPE F		
1 A-LVINC2 O L		
2 A-LVINB2 4 L 3 A-LVINA2 9 L		
ELM 5 OUTPUT LEVEL POTM. CH1		
PNT SIGNAL NAME COLOR LV TYPE F		
1 A-LVOUC1 0 L 2 A-LVOUB1 5 L		

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* WILLI STUDER AG * L O C A T I O N P I N L I S T * 88/06/09 * 13:38 * P A G F 18 *
                                                                                                                                 88/03/21 - 01
* 1.727_010.00 * STUDER A 807 * TAPE RECORDER
GRP 37 1.727.120.00
MONITOR
                                                                GRP 39 1.050.341.00
HEAD BLOCK ASSEMBLY
                                                                                                                                GRP 40 1.727.400.00
AUDIO CONTROL BOARD
ELM 1
LOUDSPEAKER
                                                                CONN. AUDIO ELECTRONICS
                                                                                                                                CONN. TAPE DECK ELECTRONICS
                                                                PNT SIGNAL NAME COLOR LV TYPE
                                                                                                                                PNT SIGNAL NAME COLOR LV TYPF
PNT SIGNAL NAME COLOR LV TYPE
                                                                      REPHL-01
                                                                                                                                     AS-STRAB
     A-LSA
A-LSB
                                                                     REPHL-01
REPHH-01
REPSC-01
SRPHL-01
SRPSC-01
RECHL-01
ERAHL-01
                                                                                                                                     AS-DATA
AS-CLK
AS-WREN
AS-STR
ELM 2
MONITOR VOLUME POTM-
PNT SIGNAL NAME COLOR LV TYPE
                                                                                                                                8
9
10
11
12
                                                                                                                                     +0.0VD
+5.6V
+15.0V
+0.0VA
-15.0V
AS-FAD
KEY
AS-RESET
+48.0V
KEY
AS-HFCLK
                                                                      ERAHL-01
ERAHH-01
     +0.0VA
A-PHIN2
     A-PHIN2
A-LVMON2
+0.0VA
A-PHIN1
A-LVMON1
A-LVMON2
A-PREOU2
A-MONIT2
A-PREOU1
A-MONITA
                                                                      TRS-K
                                                                     TRS-K
TRS-A
REPHL-02
REPHH-02
REPSC-02
SRPHL-02
SRPHH-02
SRPC-02
RECHL-02
                                                                      RECHH-02
     A-LVMON1
                                                                21
                                                                      ERAHL-02
ERAHH-02
                                                                                                                                ELM 2
CONN. MONITOR
                                                                      TRS-C
TRS-E
                                                                                                                                 PNT SIGNAL NAME COLOR LV TYPE
                                                                                                                                    A-MONIT2
KEY
A-PREOU2
A-PHIN2
A-PHSW2A
A-PHSW2A
A-PHSW1A
A-PHSW1A
A-PHSW1A
A-PHSW1B
A-PHOUT1
A-LSAMP2
-LSAMP1
+0.0VA
A-LSA
                                                                                                                                    A-PREOU1
A-MONIT1
     2 40 1.727.400.00
<-- <-- CONTINUATION
                                                                GRP 40 1.727.400.00 

<-- <-- <-- CONTINUATION
ELM 3
CONN. PHANTOM POWERING SWITCH
                                                                 ELM 22
CONN. AUDIO ELECTRONICS CH1
                                                                                                                                 ELM 24
CONN. AUDIO ELECTRONICS CH 1
PNT SIGNAL NAME COLUR LV TYPE
                                                                 PNT SIGNAL NAME COLOR LV TYPE
                                                                                                                                 PNT SIGNAL NAME COLOR LV TYPE
 1 A-PHTM3
2 KEY
3 A-PHTM2
4 A-PHTM1
                       9
                                                                                                                                    A-D0
A-D1
A-D2
A-D3
WR-REPR1
AS-STRAB
A-D4
A-D5
A-D6
A-D7
C-NAB
A-D8
A-D7
C-NAB
C-INPUTI
C-INPUTI
C-UCALOUI
C-UCALOUI
C-UCAT
C-OUTSW
A-MONITI
                                                                      A-RECIN1
                                    Ν
                                                                  1 2 3 4 5
                                                                     A-RECINI
C-ERASEI
C-BIASI
C-EQA
C-EQB
+5.0VA
WR-BIASI
A-DO
A-D1
 ELM 11
CONV. OPTION
PNT SIGNAL NAME COLOR LV TYPE F
                                                                      A-D1
A-D2
+0.0VD
WR-REC1
AS-STRAB
A-D4
A-D5
A-D6
A-D7
C-REC1
A-HFIN1
ELM 12
CONN. OPTION
 PNT SIGNAL NAME COLOR LV TYPE
     +15.0V
+0.0VA
     -15.0V
+0.0VD
+5.0VA
                                                                 ELM 23
CGNN. AUDIO ELECTRONICS CH1
                                                                                                                                 ELM 31
CONN. INSERT. INPUT CIRCUIT
                                                                 PNT SIGNAL NAME COLOR LV TYPE
ELM 13
CONN. OPTION
                                                                                                                                 PNT SIGNAL NAME COLOR LV TYPF
                                                                 1 +15.0V

2 -15.0V

3 C-BASS

4 A-SECRP1

5 C-EQB

6 C-EQA

7 C-SYNC1

8 C-REPR01

9 C-SECRP1

10 A-CTALK1

11 +0.0VA

12 +5.0VA

13 +0.0VD
                                                                                                                                  1 A-PREOU1
 PNT SIGNAL NAME COLOR LV TYPE
                                                                                                                                     A-RECIN1
+5.0VA
+0.0VD
A-PREOU2
-15.0V
A-RECIN2
CONN. AUDIO ELECTRONICS CH1
 PNT SIGNAL NAME COLOR LV TYPE
     +48.0V
C-NAB
C-MICAT1
A-PREOU1
C-CALIN1
C-UNCIN1
C-MICON1
                                     N
N
                                                                                                                                                                                     ٠/٠
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	************************************	**************************************
GRP 40 1.727.400.00 < < CONTINUATION	GRP 40 1.727.400.00 < < CONTINUATION	GRP 40 1.727.400.00 < < CONTINUATION
ELM 32 CONN. INSERT, INPUT CIRCUIT	ELM 35 CONN. INSERT, OUTPUT CIRCUIT	ELM 42 CONN. AUDIO ELECTRONICS CH2
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF F
1 -15.0V N 2 +0.0VA N 3 +15.0V N 4 C-INSERT N 5	1 C-EQN N 2 C-EQF N 3 C-EQM N 4 C-EQS N 5 C-INSERT N	1 A-RECIN2 N 2 C-ERASE2 N 3 C-BIAS2 N 4 C-EOA N 5 C-EOB N
6 C-EQS N 7 C-EQM N 8 C-EQF N 9 C-EQN N	6 +5-0VA N 7 +0-0VD N 8 N 9 N	6 +5.0VA N 7 WR-BIAS2 N 8 A-D0 N 9 A-D1 N 10 A-D2 N
ELM 33 CONN. PREAMPLIFIER, SECOND REPRO PRT SIGNAL NAME COLOR LY TYPE F	ELM 36 CONN. INSERT, OUTPUT CIRCUIT PNT SIGNAL NAME COLOR LY TYPE F	11 A-D3 N 12 +0-0VD N 13 WR-REC2 N 14 AS-STRAB N 15 A-D4 N
1 -15.0V N 2 +0.0VA N 3 +15.0V N 5 N 6 N	1 N 2 N 3 A-DRVIN2 N 4 +0.0VA N 5 A-TAPOU2 N 6 -15.0V N 7 A-DRVIN1 N 8 +15.0V N	16 A-D5 N 17 A-D6 N 18 A-D7 N 19 C-REC2 N 20 A-HFIN2 N  ELM 43 CONN. AUDIO ELECTRONICS CH2
9 N	9 A-TAPOU1 N	PNT SIGNAL NAME COLUR LV TYPF F
ELM 34 CONN. PREAMLIFIER, SECOND RÉPRO	ELM 41 CONN. AUDIO ELECTRONICS CH2	1 +15.0V N 2 -15.0V N 3 C-BASS N
PNT SIGNAL NAME COLOR LV TYPE F  1	PNT SIGNAL NAME COLOR LV TYPE F  1 +48.0V N 2 C-NAB N 3 C-MICAT2 N 4 A-PREGUZ N 5 C-CALINZ N 6 C-UNCINZ N 7 C-MICONZ N	
9 A-SECRP2 N -/-	-/·	./.
* WILLI STUDER AG * L 0 C A T ***********************************	I O N P I N L I S T ***********************************	* 88/06/09 * 13:38 * PAGF 21 * **********************************
GRP 40 1.727.400.00 C CONTINUATION	GRP 41 1.727.420.00 AUDIO ELECTRONICS CH1	GRP 41 1.727.420.00

1.727.010.00 * STUDER A 807	** TAPE RECORDER  **********************************	* 88/03/21 - 01
P 40 1.727.400.00 CONTINUATION	GRP 41 1.727.420.00 AUDIO ELECTRONICS CH1	<pre></pre>
M 44 CONN. AUDIO ELECTRONICS CH2	ELM 1 CONN. MIC LEVEL POT, CH1	ELM 5 CONN. HEAD BLOCK, REPRO
IT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF
A-DO N 1 A-D1 N 1 A-D2 N 1 A-D3 N 1 A-D3 N 1 A-D3 N 1 WR-REPR2 N	1 A-LVMIA1 9 N 2 KEY N 3 A-LVMIB1 6 N 4 A-LVMIC1 S N	1 REPHL-01 6 N 2 REPHH-01 9 N 3 KEY N 4 REPSC-01 S N
AS-STRAB N A-D4 N A-D5 N A-D6 N	ELM 2 CONN. MIC AND LINE INPUTS, CH1	ELM 6 CONN. OUTPUT LEVEL POT. CHI
A-D7 N C-MAB N PA-DRVIN2 N	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF  1 A-LVOUA1 9 N 2 KEY N
B A-PREDU2 N 6 A-TAPOU2 N 6 C-INPUT2 N 7 C-CALGU2 N	2 A-LINB1 6 N 3 A-LINS1 5 N 4 KEY N 5 A-MICSS1 5 N	2 KEY N 3 A-LVOUB1 5 N 4 A-LVOUC1 0 N
7 C-UNCOU2 N 3 C-CUEAT N 9 C-OUTSW N 9 A-MONIT2 N	7 A-MICSA1 9 N 8 +0.0VA N 9 A-MICSW1 N	ELM 7 CONN. LINE OUTPUT CONNECTOR. CH1
	10 A-MICAS1 N	PNT SIGNAL NAME COLOR LV TYPF
	ELM 3 CONN. LINE LEVEL POT, CH1	1 A-LOUTB1 3 N 2 A-LOUTA1 2 N 3 KEY N 4 A-VUMTR1 1 N
	PNT SIGNAL NAME COLOR LV TYPE F  1 A-LVINA1 9 N	ELM 11
	2 A-LVINB1 2 N 3 KEY N	CONN. AUDIO CTL. J21
	4 A-LVINC1 O N	PNT SIGNAL NAME COLOR LV TYPF
	ELM 4 CONN. HEAD BLOCK, RECORD	1 +48.0V N 2 C-NAB N 3 C-MICATI N
	PNT SIGNAL NAME COLOR LY TYPE F	4 A-PREDU1 N 5 C-CALIN1 N 6 C-UNCIN1 N
	1 RECHH-01 8 N 2 RECHL-01 7 N 3 ERAHH-01 1 N 4 KEY N	7 C-MICON1 N

1.727.010.00 * STUDER A 80	**************************************	* 88/03/21 - 01
P 41 1.727.420.00	GRP 41 1.727.420.00 < < CONTINUATION	GRP 42 1.727.420.00 AUDIO ELECTRONICS CH2
M 12 CONN. AUDIO CTL, J22	ELM 14 CONN. AUDIO CTL. J24	ELM 1 CONN. MIC LEVEL POT. CH2
T SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF
A-RECINI N C-ERASEI N C-BIASI N C-EQA N C-EQB N	1 A-D0 N 2 A-D1 N 3 A-D2 N 4 A-D3 N 5 WR-REPRI N	1 A-LYMIA2 9 N 2 KEY N 3 A-LYMIB2 6 N 4 A-LYMIC2 S N
+5-0VA N WR-BIAS1 N A-DO N A-O1 N	6 AS-STRAB N 7 A-D4 N 8 A-D5 N 9 A-D6 N	ELM 2 CONN. MIC AND LINE INPUTS. CH2
A-D2 N A-D3 N +0.0VD N WR-REC1 N AS-STRAB N A-D4 N N-D5 N	10 A-D7 N 11 C-NAB N 12 A-DRVIN1 N 13 A-PREOU1 N 14 A-TAPOU1 N 15 C-INPUTI N 16 C-CALOU1 N	PNT SIGNAL NAME COLOR LV TYPF  1
A-D6 N A-D7 N C-REC1 N A-HFIN1 N	17 C-UNCOUI N 18 C-CUEAT N 19 C-OUTSW N 20 A-MONITI N	6 A-MICSB2 6 N 7 A-MICSB2 9 N 8 +0.0VA N 9 A-MICSW2 N 10 A-MICSW2 N
M 13 CONN. AUDIO CTL, J23		ELM 3 COŃN. LINE LEVEL POT. CH2
T SIGNAL NAME COLOR LV TYPE F		PNT SIGNAL NAME COLOR LV TYPF
+15.0V N -15.0V N C-8ASS N A-SECRP1 N C-EQB N C-EQB N		1 A-LVINA2 9 N 2 A-LVINB2 4 N 3 KEY N 4 A-LVINC2 O N
C-SYNC1 N C-REPRO1 N C-SECRP1 N A-CTALK1 N		ELM 4 CONN. HEAD BLOCK. RECORD
+0.0VA N +5.0VA N		PNT SIGNAL NAME COLOR LV TYPF
+0.0VD N		1 RECHH-02 1 N 2 RECHL-02 0 N 3 ERAHH-02 3 N 4 KEY N 5 ERAHL-02 2 N

* WILLI STUDER AG * L G C A T ***********************************	**************************************	* 88/06/09 * 13:38 * PAGF 73 * **********************************
GRP 42 1.727.420.00 < < CONTINUATION	GRP 42 1.727.420.00 < < CONTINUATION	GRP 42 1.727.420.00
ELM 5 CUNN. HEAD BLOCK, REPRO	ELM 12 CONN. AUDIO CTL, J42	ELM 14 CONN. AUDIO CTL. J44
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF F
1 REPHL-02 6 N 2 REPHH-02 9 N 3 KEY N 4 REPSC-02 S N	1 A-RECIN2 N 2 C-ERASE2 N 3 C-BIAS2 N 4 C-EQA N 5 C-EQB N	1 A-DO N 2 A-D1 N 3 A-D2 N 4 A-D3 N 5 WR-REPR2 N
ELM 6 CONN. OUTPUT LEVEL POT, CH2	6 +5.0VA N 7 WR-BIAS2 N 8 A-DO N 9 A-D1 N	6 AS-STRAB N 7 A-D4 N 8 A-D5 N 9 A-D6 N
PNT SIGNAL NAME COLOR LV TYPE F	10 A-D2 N	10 A-D7 N
1 A-LVOUA2 9 N 2 KEY N 3 A-LVOUB2 6 N 4 A-LVOUC2 0 N	11 A-D3 N 12 +0.0VD N 13 WR-REC2 N 14 AS-STRAB N 15 A-D4 N	11 C-NAB N 12 A-DRV IN2 N 13 A-PREOUZ N 14 A-TAPOUZ N 15 C-INPUTZ N 16 C-CALOUZ N
ELM 7 CONN. LINE OUTPUT CONNECTOR, CH2	17 A-D6 N 18 A-D6 N 19 C-REC2 N 20 A-HFIN2 N	17 C-CNGOU2 N 18 C-CUEAT N 19 C-OUTSW N 20 A-MONIT2 N
PNT SIGNAL NAME COLOR LV TYPE F		***************************************
1 A-LOUTB2 3 N 2 A-LOUTA2 2 N 3 KEY N 4 A-YUMTR2 1 N	ELM 13 CONN. AUDIO CTL, J43 PNT SIGNAL NAME COLOR LV TYPE F	
ELM 11 CONN. AUDIO CTL, J41	1 +15.0V N 2 -15.0V N 3 C-BASS N 4 A-SECRP2 N	
PNT SIGNAL NAME COLOR LV TYPE F	5 C-EQB N	
1 +48.0V N 2 C-NAB N 3 C-MICAT2 N 4 A-PREOU2 N 5 C-CALIN2 N 6 C-UNCIN2 N 7 C-MICON2 N	6 C-EQA N 7 C-SYNC2 N 8 C-REPRO2 N 9 C-SECRP2 N 10 A-CTALK2 N 11 +0.0VA N 12 +5.0VA N 13 +0.0VD N	
./.	•/•	

	43 1. PREAMPLIFIER	F. SECON	HEAD			44 1. MONO/STEREO	SWITCH. II	NPUT AMPL.	====			727.441.00	
ELM	1 CONN. HEAD B				ELM	1 CONN. M/S AD				ELM	31 CONN. AUDIO		
	SIGNAL NAME					SIGNAL NAME					SIGNAL NAME		
1 2 3 4 5 6 7	SRPHL-02 KEY SRPHH-02 SRPSC-02 SRPHL-01 SRPHH-01 SRPSC-01	6 9 S 6 9 S	N N N N N N		1 2 3 4 5 6 7 8 9	R-RECLVA R-RECLVB S-TG60 S-TG125 S-TG1K S-TG10K S-TG16K	4 5 6 7 8 9	N N N N N N N N N		1 2 3 4 5 6 7 8	A-PREDU1  A-REC IN1 +5.0VA +0.0VD A-PREDU2  A-REC IN2	N N N N N N	
PNT	SIGNAL NAME	COLOR LV	TYPE	 F	12	S-TGOFF S-TGO S-TGINHI	1 2 3	N N		ELM	32 CONN. AUDIO	CTL. J32	
1 2	-15.0V +0.0VA +15.0V		N N N N N N N		17 18	2 CONN. M/S OU	7 8 			PNT	SIGNAL NAME -15.0V +0.0VA +15.0V C-INSERT C-EQS	COLOR LV TY N N N N N N N N N	/PF
9			N 		PNT	SIGNAL NAME	COLOR LV	TYPE	F	8	C-EOF C-EON	N N	
ELM	34 CONN. AUDIO	CTL, J34			1 2	S-TG20DB S-TG10DB	1 2	N N					
	SIGNAL NAME					C-MONOB C-MONOA	4	N N					
1 2 3			N N N		6 7	KEY		N N					
4 5 6	A_SECOD1		N N N						•/•				
8	A-SECRP1 +0.0VA A-SECRP2		N N										

* WILLI STUDER AG * L O C A T  **********************************	**************************************	* 88/06/09 * 13:38 * PAGF 25 * **********************************
GRP 45 1.727.442.00 MONO/STEREO SWITCH, OUTPUT AMPL.	GRP 46 1.727.443.00 MONG/STEREO SWITCH, ADJUSTMENT	GRP 92 1.727.920.00 EXT. VU PANEL
ELM 1 CONN. M/S INPUT AMPL. JO1	ELM 1 CONN. M/S INPUT AMPL. JO1	ELM 1 CONN. VU PANEL, CTL
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPF F
1 S-TG20DB 1 L 2 S-TG10DB 2 L 3 C-MONOB L 4 C-MONOA 4 L  ELM 2 CUNN. M/S ADJUSTMENT	1 R-RECLVA 4 L 2 R-RECLVB 5 L 3 R-REPLVA 1 L 4 R-REPLVB 3 L  ELM 2 TEST GEN. LEVEL SWITCH	1 EXT-D7 7 N 2 EXT-D5 5 N 3 EXT-D6 6 N 4 EXT-ENLD 9 N 5 EXT-DATA 3 N 6 EXT-CLK 1 N 7 N
PNT SIGNAL NAME COLOR LV TYPE F	PNT SIGNAL NAME COLOR LV TYPE F	9 +15-0V 2 N 10 -15-0V 6 N
i R-REPLVB 3 Y 2 R-REPLVA 1 Y	1 2 S-TG10DB 2 L 3 S-TG20DB 1 L 4 S-TG4TT 6 L	11 +0.0VA 0 N 12 +5.6V 5 N 13 +0.0VD 0 N
ELM 35 CONN. AUDIO CTL, J35	4 S-TGATT 6 L	ELM 2 CONN. VU PANEL. AUDIO
PNT SIGNAL NAME COLOR LV TYPE F	TEST GEN. FREQUENCY SWITCH	PNT SIGNAL NAME COLOR LV TYPF F
1 C-EQN N 2 C-EQF N 3 C-EQF N 4 C-EQS N 5 C-INSERT N 6 +5.0VA N 7 +0.0VD N 8 N	PNT SIGNAL NAME COLOR LV TYPE F  1	1
ELM 36 CONN. AUDIO CTL, J36	12 S-TG0 L 13 S-TG0 L 14 S-TG0 L	11 A-PREOU2 9 N 12 A-PROSC2 S N 13 A-PHIN2 9 N
PNT SIGNAL NAME COLOR LV TYPE F	15 S-TG0 L 16 S-TG0 L	14 A-PHISC2 S N 15 A-PHIN1 9 N 16 A-PHISC1 S N
1 N 2 N 3 A-DRV IN2 N 4 +0.0VA N	17 S-TGINHI L	16 A-PHISC1 S N 17 N 18 KEY N 19 A-LSA 6 N 20 A-LSB 7 N
5 A-TAPOU2 N 6 -15.0V N 7 A-DRVIN1 N 8 +15.0V N 9 A-TAPOU1 N		./.

GRP 92 1.727.920.00 C-- CONTINUATION

ELM 5 CONN. LEVEL CONTROL. AUDIO

	CONN. LEVEL	CONTROL:	AUDIO	
PNT	SIGNAL NAME	COLOR L	.V TYPE	F
1	A-LVINA2	9	N	
2	A-LVINB2	6	N	
3	A-LVINC2	S	N	
4	A-LVOUA2	9	N	
5	A-LVOUB2	6	N	
6	A-LVOUC2	S	N	
7	A-LVINA1	9	N	
8	A-LVINB1	6	N	
9	A-LVINC1	S	N	
10	A-LVOUA1	9	N	
11	KEY		N	
12	A-LVOUB1	6	N	
13	A-LVOUC1	S	N	

	*****	***	****	***	****	***	***	****	*********	**********	******	*******	******
IGNAL NAME	COLOR	ΙM	ASY G	RP	ELM	PNT	S	L۷	TYPE	DESCRIPTION OF ELEMENT		REMARK	FLEMENT NR.
Oldua-o	0			1	7	4			Α	CONN. EXT. VU PANEL, AUDIO			
0-MOTFL			1	1	7	1	-		N	CONN. SP. MOTOR FILTER, LEFT	J07		
			1	1	8	7			N	CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL.			
			1	2	2	7			N N N	CONN. SP. MOTOR CTL.	P01 P02		
O-MUVES	0		1	0	3	1	-		N N	CONN. MOVE SENSOR			
							_						
O-MSPLY	0			7 8	1	2			L	CHARGE CAPACITOR CHC1 RECTIFIER DZ2			
	Ō		1	1	9	2			Ÿ	CONN. SP. MOTOR SUPPLY.	P1. P2		
	0		1 2	0	5	2	_		Υ	CONN. CAPSTAN MOTOR SUPPLY	P1. P2		
0-TACH1	0			1 7	5 1	1			N N	CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JOS	J05		
O-TACH2	0		1 1	1 8	4	1	-		N N	CONN. SP. MOTOR TACHO, RIGHT CONN. SP. MOTOR CTL, JO4	J04		
	1								N N	CONN. TAPE TENS. ADJUSTMENT	J01		
	1		1	4	1	11	_		N	CONN. SP. MOTOR CTL, JO1			
	0		1	1	2	1			N N	CONN. TAPE TENS. SENSOR CONN. SP. MOTOR CTL, JO2	J02		
17VAC	3		1							CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY	J04		******
0.0V	0 8 8 5 1 4 0 0 0 4 1 0 8 8 5 5 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0		10 10 10 11 11 11 11 12 22	1 1 1 1 6 6 6 6 0 0 0 0 0 0 0 0 0 0 0 0	3 4 5 5 4 4 4 1 1 1 4	9 1 14 16 17 18 5 7 9 3 8 8 15 1			В В В В N N N C C C C B N N N N N N N N N N N N	SERIAL CTL. CONNECTOR PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. TAPE DECK ELECTRONICS CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONNECTOR POWER SUPPLY CONN. SERIAL CTL. CONN. SERIAL CTL. CONN. SYNCHRONIZER A CONN. SYNCHRONIZER A CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3 VARIO SPEED PTM.	J04 J04 J01 J01 J01 J11 J13 J13 J02 J03		
0.0VA	0 0 0 0 0		10	0	6 2 6 8	13 18 12	-		В N N N N	CONN. EXT. VU PANEL, CTL CONN. CAPSTAN CTL. CONN. SPOOLING MOTOR CTL. CONN. EXT. VU-PANEL CONN. COMMAND PANEL	J02 J06 J08 J09		

*	1.727.	010.	00 4	∗ ST	UDER	Α	807	* T.	APE RECORDER		**************************************	3/21 -	01	
*****	******	***	****	***	***	****	***	****	*****	******	********	*****	*******	*******
SIGNAL NAME	COLOR	MI				PNT	S	LV	TYPE		IPTION OF ELEMENT		RFMARK	FLEMENT NR.
< CONT.OF	0				10				N		AUDIO CTL.	J10		
+0.0VA	0			11	3				N		TAPE DECK CTL.	J03		
	0			20 30	3	9			N D		TAPE DECK CTL. TAPE DECK CTL. J10	J0 1		
	0			36	1				Ľ		HEAD PHONES			
	ō			37		ī			ī		OR VOLUME POTM.			
	0			37	2	4			L		OR VOLUME POTM.			
	0			40	1				N		TAPE DECK ELECTRONICS			
	0			40 40		14			N		MONITOR			
	U				2 12	2			N N		MONITOR OPTION			
				40	23				N		AUDIO ELECTRONICS CHI			
				40	32	2			N		INSERT, INPUT CIRCUIT			
				40	33	2			N		PREAMPLIFIER. SECOND REPR	0		
				40		8			N	CONN.	PREAMLIFIER, SECOND REPRO			
				40	36	. 4			N		INSERT, OUTPUT CIRCUIT			
				40 41	43	11			N N		MIC AND LINE INPUTS, CH1			
					13				N		AUDIO CTL, J23			
				42	2	8			N		MIC AND LINE INPUTS. CH2			
					13				N	CONN.	AUDIO CTL, J43			
				43	33	2			N		AUDIO CTL. J33			
				43 44	34 32	8 2			N N		AUDIO CTL. J34			
				45		4			N N		AUDIO CTL, J32 AUDIO CTL, J36			
	0			92	1				N		VU PANEL. CTL			
+0.0VD	0			1	6	1	-		В	CONN.	EXT. VU PANEL, CTL			
	0			10		14			N	CONN.	CAPSTAN CTL.	J02		
	0			10		17			N		SPOOLING MOTOR CTL.	J06		
	0			10 10	9	14			N N		EXT. VU-PANEL	J08		
	0				10				N		COMMAND PANEL AUDIO CTL.	J09 J10		
	ŏ			11		18			N		TAPE DECK CTL.	J03		
	0			20	1	7			N		TAPE DECK CTL.	J01		
				30	2				N		DISPLAY EL.			
	0			30	3				D		TAPE DECK CTL. J10			
				30 31	2	14			N N		KEYS MATRIX COMMAND PANEL JO2			
	0			40	1	9			N		TAPE DECK ELECTRONICS			
				40	12	4			Ň		OPTION			
				40	22				N	CONN.	AUDIO ELECTRONICS CH1			
				40	23				N		AUDIO ELECTRONICS CHI			
				40 40	31 35	6 7			N		INSERT, INPUT CIRCUIT			
				40	42				N N		INSERT, OUTPUT CIRCUIT AUDIO ELECTRONICS CH2			
				40	43				N		AUDIO ELECTRONICS CH2			
					12				N		AUDIO CTL. J22			
				41	13	13			N	CONN.	AUDIO CTL. J23			
					12				N		AUDIO CTL, J42			
					13				N		AUDIO CTL, J43			
				44 45	31 35	6 7			N N		AUDIO CTL, J31 AUDIO CTL, J35			
	0			92	1				N		VU PANEL, CTL			

************* *	1.727.	010.	00 * S	TUDE	A A	3C7 *	TAPE RECORDER	* 88/03	/21 -	01	
********	*****	***	*****	****	****	*****	********	**********	***	*******	******
SIGNAL NAME	COLOR	ΜI	ASY GR			S LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
+1.2V	2 0		20 21	2			N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3	J03		
+15.0V	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		1 10 10 10 10 10 11 11 11 13 20 20 30 35 40 40 40 40 40	6 2 6 8 9 10 2 3 1 1 2 3 7 1 12 23 23	3 12 20 10 14 14 5 16 3 8 4 16 3			CONN. EXT. VU PANEL, CTL CONN. CAPSTAN CTL. CONN. SPOOLING MOTOR CTL. CONN. SPOOLING MOTOR CTL. CONN. COMMAND PANEL CONN. TAPE TENS. SENSOR CONN. TAPE TENS. SENSOR CONN. TAPE DECK CTL. CONN. TAPE DECK CTL. CONN. TAPE DECK CTL. CONN. VARI SPEED CTL. CONN. VARI SPEED CTL. CONN. TAPE DECK CTL. JIO VARIO SPEED POTM. CONN. TAPE DECK CTL. CONN. AUDIO ELECTRONICS CH1 CONN. INSERT. INPUT CIRCUIT CONN. INSERT. OUTPUT CIRCUIT CONN. INSERT. OUTPUT CIRCUIT CONN. AUDIO ELECTRONICS CH2	J02 J06 J08 J09 J10 J02 J03 J01 J02		
	2		42 43 44 45 92	13 33 32 36 1	1 3 3 8		N N N N	CONN. AUDIO CTL. J43 CONN. AUDIO CTL. J33 CONN. AUDIO CTL. J32 CONN. AUDIO CTL. J36 CONN. VU PANEL, CTL  CONN. TAPE DECK ELECTRONICS	 J04		
	2 2			4	14 6		N C	CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY	J04 J01		
+24.0V	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		6 6 6 6	4 4 4 4 1 1	9 10 11 12 13		N N N N C X X	CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY CONN. TAPE DECK CTL. JO7 CONN. TAPE DECK CTL. JO7 CONN. TAPE DECK CTL. JO7	J04 J04 J04 J04 J04 J01		
+24V-RMT	8 0 9 8 8 8		1 6 10 10	4 5 4 1 4	25 25 4 3 4		B B B C C B N	SERIAL CTL. CONNECTOR PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. TAPE DECK ELECTRONICS CONNECTOR POWER SUPPLY CONN. SERIAL CTL. CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J04 J01 J04 J12 J14		

							APE RECORDER *******	8 * ***********************************	8/03/21 - *******		· ***************
SIGNAL NAME		ASY G					TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
+48.0V	7 7	1 4 4 4 4 4	0 1 0 2 0 4 1 1 2 1	1011	12 17 1 1 1		N N N N N	CONN. AUDIO CTL. CONN. TAPE DECK ELECTRONICS CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J21 CONN. AUDIO CTL, J41	J10		
+5.0V	5 5 5 5 5	1	0 1 1 7 8	3 4 5 1 1	2 3 2 2 5		N	CONN. MOVE SENSOR CONN. SP. MOTOR TACHO, RIGHT CONN. SP. MOTOR TACHO. LEFT CONN. SP. MOTOR CTL, JO5 CONN. SP. MOTOR CTL, JO4 CONN. TAPE DECK CTL. JO3	J03 J04 J05		
+5.0VA		 4 4 4 4 4 4 4 4 4 4 4 4 4	0 10 20 20 20 30 30 30 40 44 11 11 11 11 12 12 12 13 15 15 15 15 15 15 15 15 15 15 15 15 15	12 23 31 35 42 43 12 13 13 13 13 13 13	5 6 12 5 6 6 12 6 12 6		 N N N N	CONN. OPTION CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. INSERT, INPUT CIRCUIT CONN. INSERT, OUTPUT CIRCUIT CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J23 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J43 CONN. AUDIO CTL, J43 CONN. AUDIO CTL, J31			
+5.0VMF		 1	1 2	7	6 6	-	 N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR CTL,	J07 P01		
+5 <sub>*</sub> 6V	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	 1 2 3 3 3 3 4	1 0 0 0 0 0 0 1 1 0 0 0 0 0 0 0	62 68 90 31 23 42 1	2 15 16 13 17 10 19 6 5		B N N N N N N N N N N N N N N N N N N N	CONN. EXT. VU PANEL, CTL CONN. CAPSTAN CTL. CONN. SPOOLING MOTOR CTL. CONN. EXT. VU-PANEL CONN. COMMAND PANEL CONN. AUDIO CTL. CONN. TAPE DECK CTL. CONN. TAPE DECK CTL. CONN. DISPLAY EL. CONN. DISPLAY EL. CONN. KEYS MATRIX CONN. COMMAND PANEL JO2 CONN. TAPE DECK ELECTRONICS CONN. VU PANEL. CTL	J02 J08 J09 J10 J03 J01		
+50.0V	2 2 2 2 2					-	 L J Y	CHARGE CAPACITOR CHC1 RECTIFIER DZ2 CONN. SP. MOTOR SUPPLY, CONN. CAPSTAN MOTOR SUPPLY	P1, P2		
+60.0V	5	 1	6 0	4	2 8	-	 N C		J04 J01		

* WILLI ST	TUDER AG	, 4	* S I	G	N	A L		WIRE	L	**************************************	* 88/0	6/09	* 13:38 *	PAGE 31 *
*	1.727.	010	.00 * ST	UDER	R A	807 *	τ.	APE RECORDER	ł	********	* 88/0	3/21 -	01	*
********	******	***	*****	***	****	****	***	*****	****	*******	********	****	******	******
SIGNAL NAME			ASY GRP							DESCRIPTION OF ELEM			REMARK	ELEMENT NR.
-15.0V	6		1	6	16			В		CONN. EXT. VU PANEL				
	6		10		11			N		CONN. CAPSTAN CTL.		J02		
	6		10 10		19 11			N N		CONN. SPOOLING MOTO CONN. EXT. VU-PANEL		J08		
	6		10		15			N		CONN. COMMAND PANEL		J09		
	6			10				N		CONN. AUDIO CTL.		J10		
	6		11		3			N		CONN. TAPE TENS. SE	NSOR	J02		
	6		11	3	10			N		CONN. TAPE DECK CTL		J03		
	6		13		4			N		CONN. SP. MOTOR CTL	. J02			
	6		20		10			N		CONN. TAPE DECK CTL		J01		
	6		30		18			D		CONN. TAPE DECK CTL				
	6		40		13			N		CONN. TAPE DECK ELE	CIKUNICS			
				12 23				N N		CONN. OPTION CONN. AUDIO ELECTRO	INTES CHI			
				31	8			N		CONN. INSERT, INPUT				
			40	32	1			N		CONN. INSERT, INPUT				
			40	33	1			N		CONN. PREAMPLIFIER.		0		
			40	36	6			N		CONN. INSERT. DUTPU	IT CIRCUIT			
			40		2			N		CONN. AUDIO ELECTRO				
				13	2			N		CONN. AUDIO CTL. J2				
				13	2			N		CONN. AUDIO CTL, J4				
				33	1			N N		CONN. AUDIO CTL, J3				
				36	6			N		CONN. AUDIO CTL, J3 CONN. AUDIO CTL, J3				
	6		92	1	10			N		CONN. VU PANEL, CTL				
-20.0V	6		6	4		-		N		CONN. TAPE DECK ELE	CTRONICS	J04		
THE RES LANS AND THE PART THE THE TAX THE TAX AND	6		10	1				С		CONNECTOR POWER SUP				
A-CTALK1				23				N		CONN. AUDIO ELECTRO				
				13		-	`	N		CONN. AUDIO CTL, J2				
A-CTALK2				43 13				N N		CONN. AUDIO ELECTRO CONN. AUDIO CTL. J4				
4 000/101						-								
A-DRVIN1				24	7			N N		CONN. AUDIO ELECTRO CONN. INSERT, OUTPU				
					12			N		CONN. AUDIO CTL, J2				
			45	36				N		CONN. AUDIO CTL, J3	16			
A-DRVIN2				36		-		N		CONN. INSERT. OUTPU				
			40	44	12			N		CONN. AUDIO ELECTRO	NICS CH2			
					12			N		CONN. AUDIO CTL, J4				
			45	36	3	_		N		CONN. AUDIO CTL, J3	16			
A-D0			40	22		_		N		CONN. AUDIO ELECTRO	NICS CHI			
				24				N		CONN. AUDIO ELECTRO				
				42	8			N		CONN. AUDIO ELECTRO				
			40		1			N		CONN. AUDIO ELECTRO				
				12 14	8 1			N N		CONN. AUDIO CTL, J2 CONN. AUDIO CTL, J2				
			41		8			N N		CONN. AUDIO CTL, J4				
				14				N		CONN. AUDIO CTL, J4				
						_								

SIGNAL NAME		MI	ASY GRP	ELM	PNT	s	LV	TYPE	DESCRIPTION OF ELEMENT	**************************************	<b>A</b> R K	ELEMENT NR.
A-D1			40	22	9	-		N	CONN. AUDIO ELECTRONICS CH1			
			40		2 9 2			N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2			
			41	12 14	9			N N	CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24			
					2			N N	CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J44			
A- D2			40 40	22		-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1			
			40 40	42 44	10 3			N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2			
				12 14 12	3			N N N	CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24 CONN. AUDIO CTL. J42			
			42	14	3	_		N N	CONN. AUDIO CTL, J42			
A-D3			40		4			N N	CONN. AUDIO ELECTRONICS CHI			
			40	42 44 12	4			N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22			
			41		4			N N	CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42			
4 D/				14		-		N	CONN. AUDIO CTL, J44			
A-D4			40	22 24 42	7			N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CH2			
			40 41	44 12	7 15			N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22			
			41 42					N N	CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42			
A-D5				 22		-		N N	CONN. AUDIO CTL, J44  CONN. AUDIO ELECTRONICS CH1			
			40 40	42				N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2			
				12	8 16 8			N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24			
			42 42	12 14	8			N N	CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J44			
A-D6			40	22 24		-		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1			
			40	42				N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2			
			41	12 14	9			N N	CONN. AUDIO CTL. J22 CONN. AUDIO CTL. J24			
				12	17			N	CONN. AUDIO CTL, J42			
* WILLI ST *************************	TUDER AG ********	010	42 	****** G	9 **** N A ****	L *****	*****	W I R E ***********************************	CONN. AUDIO CTL, J44	88/06/09 * 13 ************** 88/03/21 - 01	3:38 * ******	PAGF 33
* WILLI ST *************************	TUDER AG ******** 1.727. ******	010	42 	***** G   ***** UDER ****	9 **** A 8 ****	S S	**** * T/ ****	**************************************	CONN. AUDIO CTL, J44  **********************************	88/06/09 * 13 **********************************	3:38 * ****** *****	PAGF 33
* WILLI ST ************** * *******************	TUDER AG ******** 1.727. ******	010.	42 ********* S I ******** ASY GRP 40 40	14 	9  **** A 8 **** PNT	S S	***** * 1/ ****	**************************************	CONN. AUDIO CTL, J44  **********************************	88/06/09 * 13 **********************************	3:38 * ****** *****	P A G F 33
* WILLI ST *********** * **********************	TUDER AG ******** 1.727. ******	010.	42 ************************************	14 	9  **** A 8 **** PNT  18 10 18	S S	***** * 1/ ****	WIRE	CONN. AUDIO CTL, J44  L I S T * 8  ********************************	88/06/09 * 13 **********************************	3:38 * ****** *****	P A G F 33
* WILLI ST *********** * **********************	TUDER AG ******** 1.727. ******	010.	**********  S I  ********  00 * ST  *********  ASY GRP  40  40  40  41  41  42	***** G   WDER ***** ELM   -22 24 42 44 12	9  ***** A 8 ***** 10 18 10 18 10	S S	***** * 1/ ****	**************************************	CONN. AUDIO CTL, J44  L I S T * 8  **************************  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24	88/06/09 * 13 **********************************	3:38 * ****** *****	P A G F 33
* WILLI SI * * *************** SIGNAL NAME A-D7	TUDER AG ******** 1.727. ******	010.	######################################	14 	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  **************************  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44	88/06/09 * 13 **********************************	3:38 * ****** *****	P A G F 33
* WILLI SI * * ************ SIGNAL NAME A-D7	TUDER AG	010.	*********  S I ********  ASY GRP  40 40 40 41 41 42 42 40 40 40 41 41 41 42 42	****** G ***** ELM 12 22 44 12 14 12 14	9  *** * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  **************************  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44	88/06/09 * 13 **********************************	3:38 * ****** *****	P A G F 33
* WILLI ST	COLOR AC************************************	010.	#*******  S I ********  ASY GRP  40 40 40 41 41 42 42 42 40 41 40 40 40 41 41 42 42 40 40 40 40 40 40 40 40 40 40 40 40 40	******  G   ***** UDER *****  ELM	9 ** * * A 8 * * NT 10 18 10 18 10 18 10 18 10 10 10 10 10 10 10 10 10 10	S S	***** * 1/ ****	######################################	CONN. AUDIO CTL, J44  L I S T * 8  **************************  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44	88/06/09 * 13 **********************************	3:38 * ****** *****	P A G F 33
* WILLI SI ***********  * **********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1	ruder Ac************************************	010.	*********  S I ********  ASY GRP  40 40 40 41 41 41 42 42 40 41 41 41 40 41 41 41 41 40 42 42 42 41 41 41 41 41 41 41 41 41 41 41 41 41	14 ************************************	9	S S	***** * 1/ ****	**************************************	CONN. AUDIO CTL, J44  L I S T * 8  ********************************	18/06/09 * 13 18/03/21 - 01 ************************************	3:38 * ****** *****	P A G F 33
* WILLI SI  ***********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1	1.727- ******** COLOR 9 9 9 9 9	010.	ASY GRP	14 ******  G   ******  ******  ******  ******  22 24 42 42 12 12 12 12 12 12 12 12 11 11	9	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  ***  ***  ***  ***  ***  **  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J22  CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J22	18/06/09 * 13	3:38 * ****** *****	P A G F 33
* WILLI SI  ***********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1	TUDER AG************************************	010.	#********  S I  *********  ASY GRP  40  40  41  41  42  42  41  40  42  40  42  40  42  40  42  40  42	14 ******  G   ******  ******  ******  ******  22 24 42 42 12 12 12 12 12 12 12 12 11 11	9	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  **************************  L I S T * 8  ********************************	REMA REMA REMA REMA REMA REMA REMA REMA	3:38 * ****** *****	P A G F 33
* WILLI ST	COLOR	010.	#********  S I *********  ASY GRP  40 40 40 41 41 42 42 42 41 41 41 41 41 41 41 41 41 41 41 41 41	14	9	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  **********************************	REMA REMA REMA REMA REMA REMA REMA REMA	3:38 * ****** *****	P A G F 33
* WILLI ST	TUDER AG************************************	010.	ASY GRP  40 40 40 40 41 41 42 42 40 41 41 41 41 41 41 42 42 11 41 41 41 41 41 41 41 41 41 41 41 41	14	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  ***  ***  ***  ***  ***  **  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J44  CONN. AUDIO CTL, J42 CONN. AUDIO CTL, J22 CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J24  CONN. AUDIO CTL, J22  CONN. AUDIO LINE INPUTS, C  CONN. LINE INPUT, CH2 CONN. HIC AND LINE INPUTS, C  CONN. LINE INPUT, CH2 CONN. MIC AND LINE INPUTS, C  CONN. LINE INPUT, CH2 CONN. MIC AND LINE INPUTS, C  CONN. LINE INPUT, CH2 CONN. LINE INPUT, CH1	REMA  REMA  REMA  REMA  REMA  REMA  REMA  REMA  REMA	3:38 * ****** *****	P A G F 33
* WILLI ST	TUDER AG************************************	010.	######################################	14	9	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  ***  ***  ***  ***  ***  **  **  *	REMA  REMA	3:38 * ****** *****	P A G F 33
* WILLI SI **********  SIGNAL NAME A-D7  A-HFIN1 A-HFIN2 A-LINA1 A-LINA2 A-LINB1 A-LINB2 A-LINB2	TUDER AG************************************	010.	#********  S I ********  ASY GRP  40 40 40 40 41 41 42 42 41 41 41 41 41 41 41 42 42 42 41 41 41 41 41 42 42 42 42 40 41 41 41 41 41 42 42 42 42 40 41 41 41 41 41 41 42 42 42 42 42 43 44 41 44 41 42 42 42 43 44 41 41 42 42 42 43 44 44 41 42 42 42 43 44 44 41 42 42 42 43 44 44 44 41 42 42 42 43 44 44 44 44 44 44 44 44 44 44 44 44	14	9	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  ********************************	REMA  REMA	3:38 * ****** *****	P A G F 33
* WILLI ST  ***********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1  A-LINA2  A-LINB1  A-LINB2  A-LINB1  A-LINB2  A-LINB1	TUDER AG************************************	010.	#********  S I ********  ASY GRP  40 40 40 41 41 41 42 1 41 1 42 1 41 1 42 1 41 1 41 1 41 1 41 1 41 1 41	14	9	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  **************************  L I S T * 8  ********************************	REMA  REMA	3:38 * ****** *****	P A G F 33
* WILLI SI ***********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1  A-LINA2  A-LINB2  A-LINB1  A-LINB2  A-LINB2  A-LINS2  A-LINS2	TUDER AG************************************	010.	#********  S I *********  ASY GRP  40 40 40 41 41 42 42 42	14	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  **********************************	H1	3:38 * ****** *****	P A G F 33
* WILLI ST  ***********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1  A-LINA2  A-LINB1  A-LINB2  A-LINS1  A-LINS2  A-LOUTA1  A-LOUTA2  A-LOUTA2	TUDER AG************************************	010.	#********  S I ********  ASY GRP  40 40 40 41 41 41 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42 1 41 1 42	14  ******  G    WUGER  ******  ELM    12    14    12    12    12    12    12    11    2    11    2    11    2    11    2    11    2    10    7    10	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  L I S T * 8  ***  ***  ***  ***  ***  **  **  *	REMA  REMA	3:38 * ****** *****	P A G F 33
* WILLI SI ***********  ***********  **********	FUDER AG************************************	010.	42	14	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  **********************************	REMA  REMA  REMA  REMA  REMA  REMA  CH1  CH2  CH1  CH2  CH1	3:38 * ****** *****	P A G F 33
* WILLI ST  ***********  ***********  SIGNAL NAME  A-D7  A-HFIN1  A-HFIN2  A-LINA1  A-LINA2  A-LINB1  A-LINB2  A-LINS1  A-LINS2  A-LOUTA2  A-LOUTA2  A-LOUTB1	TUDER AG************************************	010.	#********  S I ********  ASY GRP  40 40 40 41 41 42 42 40 41	14  ******  G    WUDER  ******  ELM    22	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  **********************************	REMA  REMA  REMA  REMA  REMA  REMA  CH1  CH2  CH1  CH2  CH1	3:38 * ****** *****	P A G F 33
* WILLI ST  **********  ***********  **********	TUDER AG*********  1.727********  COLOR	010.	42	14	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  **********************************	REMA  REMA  REMA  REMA  REMA  REMA  CH1  CH2  CH1  CH2  CH1	3:38 * ****** *****	P A G F 33
* WILLI ST  ***********  ***********  **********	TUDER AG************************************	010.	######################################	14  ******  G    WUGER  *****  ELM    22	9 ** * * * * * * * * * * * * * * * * *	S S	***** * 1/ ****	W I R E APE RECORDER  TYPE  N N N N N N N N N N N N N N N N N N N	CONN. AUDIO CTL, J44  **********************************	REMA  REMA  REMA  REMA  REMA  REMA  CH1  CH2  CH1  CH2  CH1	3:38 * ****** *****	P A G F 33

A-LSAMP2		MI	ASY GRP EL		S L	V TYPE		REMARK	ELEMENT NR.
A-LSAMP2	3		36 40			L N	CONN. HEAD PHONES CONN. MONITOR		
A-LSB	7 7 7 7		37 : 40 :	7 20 L 2 2 17 2 20		A L N	CONN. EXT. VU PANEL, AUDIO LOUDSPEAKER CONN. MONITOR CONN. VU PANEL, AUDIO		
A-LVINA1	9 9 9 9		35 41	7 16 2 3 3 1 5 7		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH1 CONN. LINE LEVEL POT. CH1 CONN. LEVEL CONTROL, AUDIO		
A-LV I NA 2	9 9 9					A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH2 CONN. LINE LEVEL POT, CH2 CONN. LEVEL CONTROL, AUDIO		
A-LVINB1	6 2 2		35 41	7 3 2 2 3 2 5 8		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH1 CONN. LINE LEVEL POT, CH1 CONN. LEVEL CONTROL, AUDIO		
A-LV I NB2	6 4 4 6		35 42	7 10		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH2 CONN. LINE LEVEL POT, CH2 CONN. LEVEL CONTROL, AUDIO		
A-LV I NC 1	S 0 0 0 S		1 35	7 15 2 1 3 4		A L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH1 CONN. LINE LEVEL POT, CH1 CONN. LEVEL CONTROL, AUDIO		
A-LVINC2	s 0 0		1 35 42	7 22 4 1 3 4		- N L N	CONN. EXT. VU PANEL, AUDIO LINE LEVEL POTM. CH2 CONN. LINE LEVEL POT, CH2		
A-LVMIA1	S  9 9		92 35 41	1 3		L N	CONN. LEVEL CONTROL, AUDIO  MIC LEVEL PCTM. CH1 CONN. MIC LEVEL PDT, CH1		
A-LVMIA2	9 9			3 3 1 1		L N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2		
A-LVMIB1	6		35 41	1 2 1 3		L N	MIC LEVEL POTM. CH1 CONN. MIC LEVEL POT, CH1		
A-LVMIB2	6			3 2		L N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2		
A-LVMIC1	0 S		35 41	1 1 1 4		L N	MIC LEVEL POTM. CH1 CONN. MIC LEVEL POT, CH1		
A-LVMIC2	0 S		35 42			L N	MIC LEVEL POTM. CH2 CONN. MIC LEVEL POT, CH2		
* * * * * * * * * * * * * * * *	1.727.	**** 010.	********** 00 * STUD	****** ER A 8	***** C7 *	TAPE RECORD	E L I S T * 88/06/09  EEL I S T * 88/03/21  EER * 88/03/21	* 13:38 * *********** 01	: РАG F 35 *******
********* *************************	1.727. **********************************	**** 010. ****	**************************************	****** ER A 8 ******* LM PNT	***** C7 * ****	TAPE RECORD ************************************	E L I S T * 88/06/09  DER * 88/03/21  DESCRIPTION OF ELEMENT	* 13:38 * *********** 01	: РДG F 35 *******
*************  ***********  SIGNAL NAME  A-LVMON1	1.727. **********************************	**** 010. ****	ASY GRP E	******* ER A 8 ******* LM PNT  2 6 2 12	***** C7 * ****	TAPE RECORD ***********  V TYPE L L	DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM. MONITOR VOLUME POTM.	* 13:38 * ********* 01 ******	PAGF 35
***************  ************  SIGNAL NAME  A-LVMON1	******* 1.727. ******** COLOR  9 9  9	**** 010. ****	ASY GRP E  37 37 37 37	******** ER A 8 *******  LM PNT 2 6 2 12 2 3 2 7	***** C7 * ****	***************  ***********  V TYPE  L  L  L  L  L  L  L  L  L  L  L  L  L	E L I S T * 88/06/09  DER * 88/03/21  ***********************************	* 13:38 * ********* 01 ******	PAGF 35
*************  ***********  SIGNAL NAME  A-LVMON1	******* 1.727. ******* COLOR  9 9  9	**** 010. ****	**************************************	**************************************	***** S L 	**************  ************  ********	DESCRIPTION OF ELEMENT  DESCRIPTION OF ELEMENT  MONITOR VOLUME POIM.  MONITOR VOLUME POIM.  MONITOR VOLUME POIM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POIM. CHI CONN. OUTPUT LEVEL POIT, CHI CONN. LEVEL CONTROL. AUDIO	** 13:38 * *********** - 01 *************  REMARK	PAGF 35
************  SIGNAL NAME A-LYMON1 A-LYMON2 A-LYOUA1	******* 1.727. ******  COLOR 9 9 9 9 9	**** 010. ****	ASY GRP E  37 37 1 35 41 92 1 35 42 92	*********  *********  LM PNT 2 6 2 12 2 3 2 7 7 1 5 3 6 1 5 10 7 8 6 3 6 1 5 4	***** C7 * ****** S L 	***********  ***********  ************	DESCRIPTION OF ELEMENT  DESCRIPTION OF ELEMENT  MONITOR VOLUME POIM.  MONITOR VOLUME POIM.  MONITOR VOLUME POIM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POIM. CH1 CONN. OUTPUT LEVEL POIM. CH2 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL CONTROL. AUDIO OUTPUT LEVEL POIM. CH2 CONN. OUTPUT LEVEL POIT, CH2 CONN. EXT. VU PANEL, AUDIO	* 13:38 * ********** - 01 ***********  REMARK	PAGF 35
*************  SIGNAL NAME  A-LYMON1  A-LYMONZ  A-LYOUA1	********* CGLOR 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	**** 010. ****	************  ASY GRP E  37 37 37 37 37 31 35 41 92	**************************************	****** S L	***********  ************  ***********	E L I S T * 88/06/09  DER * 88/03/21  ***********************************	* 13:38 * ********** - 01 ***********  REMARK	PAGF 35
************  SIGNAL NAME A-LYMON1  A-LYMON2  A-LYOUA1	********* 1.727  *******  COLOR 9 9 9 9 9 9 9 9 9 9 9 9 9 9	**** 010. ****	************  ASY GRP E  37 37	**************************************	***** 8C7 * ****  S L	***********  ***********  ************	DESCRIPTION OF ELEMENT  DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CHI CONN. OUTPUT LEVEL POTM. CHI CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. CH2 CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL, AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. CONN. CONTROL CH1 CONN. CH1 CONN. CH1	* 13:38 *	PAGF 35
************  ***********  SIGNAL NAME  A-LYMON1  A-LVMON2  A-LVOUA1  A-LVGUA2	**************************************	**** 010. ****	***************  ASY GRP E  37 37 37 37 1 35 41 92 1 35 42 92 1 35 41 92 1 35 41 92	**************************************	***** S L	***********  ************  ***********	DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL CONTROL. AUDIO OUTPUT LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL. AUDIO OUTPUT LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL. AUDIO OUTPUT LEVEL CONTROL. AUDIO	* 13:38 *	PAGF 35
***************  ************  ********	*********  1.727  1.727  *******  COLOR   9  9   9  9   9  9	**** 010. ****	ASY GRP E  37 37 37 37 37 37 37 35 41 92	**************************************	***** S L	**********  **********  ***********  ****	DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL CONTROL. AUDIO OUTPUT LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL. AUDIO OUTPUT LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL. AUDIO OUTPUT LEVEL CONTROL. AUDIO	* 13:38 *	PAGF 35
************ ********** ********** *****	********  1.727  1.727  *******  COLOR   9  9   9  9   9  9	**** 010. ****	************  ASY GRP E  37 37 37 37 1 35 41 92	**************************************	***** S L	**********  **********  ***********  ****	DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH1 CONN. EXT. VU PANEL, AUDIO  CONN. EXT. VU PANEL, AU	* 13:38 *	PAGF 35
*********** **********  SIGNAL NAME A-LVMON1 A-LVMON2 A-LVOUA1  A-LVOUB1  A-LVOUB2  A-LVOUC1  A-LVOUC2  A-MICAS1 A-MICAS2	**************************************	**** **** MI 	************  ASY GRP E  37 37 37 37 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 42 92 1 42 92 1 42	**************************************	***** S L	**********  **********  ***********  ****	DESCRIPTION OF ELEMENT  DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO CONPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO CONN. EXT. VU PANEL, AUDIO CONN. LEVEL CONTROL. AUDIO CONN. MIC AND LINE INPUTS, CH1	** 13:38 * **********  - 01 ***********  REMARK	PAGF 35
************ *********** ********** ****	********  1.727  1.727  *******  COLOR   9  9   9  9   5  6  6  6  6  6  5  0  S   9  9   9  9   9  9   9  9	**** MI	***************  ASY GRP E  37 37 37 37 37 41 92 135 42 92 135 42 92 135 41 92	**************************************	***** S L	**********  **********  ************  ****	DER * 88/03/21  ***********************************	** 13:38 * **********  - 01 ***********  REMARK	PAGF 35
************ ********** ********** *****	**************************************	**** MI	************  ASY GRP E	**************************************	***** S L	**********  **********  ***********  ****	DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. DEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. LEVEL CONTROL. AUDIO OUTPUT LEVEL POTM. CH2 CONN. DUTPUT LEVEL POTM. CH2 CONN. DUTPUT LEVEL POTM. CH1 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. LEVEL CONTROL. AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH2 CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL CONTROL, AUDIO  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH1 CONN. EXT. VU PANEL, AUDIO CONN. LEVEL CONTROL, AUDIO CONN. EXT. VU PANEL, AUDIO CONN. E	** 13:38 * **********  - 01 ***********  REMARK	PAGF 35
************ *********** ********** ****	********  1.727  1.727  *******  COLOR   9  9   9  9   6  6  6  6  6  6  7  9  9   9  9   6  6  6  6  6  6  6  6  6  6  6	**** MI	************  ASY GRP E  37 37 37 37 37 37 37 37 37 37 41 92 1 35 42 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 35 41 92 1 1 35 42 92 1 1 41 1 1 41 1 1 1 42	**************************************	***** S L	**********  **********  ***********  ****	DESCRIPTION OF ELEMENT  MONITOR VOLUME POTM.  CONN. EXT. VU PANEL, AUDIO OUTPUT LEVEL POTM. CH1 CONN. OUTPUT LEVEL POTM. CH2 CONN. EXT. VU PANEL, AUDIO  CONN. EXT. VU PANEL, AUDIO  CONN. EXT. VU PANEL, AUDIO  OUTPUT LEVEL POTM. CH2 CONN. OUTPUT LEVEL POT, CH2 CONN. OUTPUT LEVEL POT, CH2 CONN. EXT. VU PANEL, AUDIO  CONN. EXT. VU PANEL, AUD	** 13:38 * **********  - 01 ***********  REMARK	PAGF 35

SIGNAL NAME	COLOR	МΙ	ASY GRP	ELM PNT	s	L۷	TYPE	DESCRIPTION OF ELEMENT	REMARK	ELEMENT NR.
A-MICSS2	s		1		-			CONN. MIC INPUT, CH2		
	\$		42	2 5	_		N	CONN. MIC AND LINE INPUTS, CH2		
A-MICSW1			41	2 9	_		N	CONN. MIC AND LINE INPUTS. CH1		
-MICSH2			42	2 9			N	CONN. MIC AND LINE INPUTS. CH2		
TINOM-	1		1	7 5	-		A	CONN. EXT. YU PANEL. AUDIO		
	1		37 40	2 11 2 20			L N	MONITOR VOLUME POTM. CONN. MONITOR		
				24 20 14 20			N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL. J24		
	9		92	2 5	_		N	CONN. VU PANEL, AUDIO		
-MONIT2	2			7 12			A	CONN. EXT. VU PANEL. AUDIO		
	2 2		37 40	2 9 2 1			N N	MONITOR VOLUME POTM. CONN. MONITOR		
			42	44 20 14 20			N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J44		
	9		92	2 9	_		N	CONN. VU PANEL, AUDIO		
-MONSC1	S 		92	2 6	_		N	CONN. VU PANEL, AUDIO		
-MONSC2	S		92	2 10	_		N	CONN. VU PANEL, AUDIO		
-PHIN1	8		1	7 6			A	CONN. EXT. VU PANEL. AUDIO		
	8		37 40	2 5 2 8			L N	MONITOR VOLUME POTM. CONN. MONITOR		
	9		92	2 15	-		N	CONN. VU PANEL. AUDIO		
-PHIN2	4		1 37	7 19			A L	CONN. EXT. VU PANEL, AUDIO MONITOR VOLUME POTM.		
	4		40 92	2 4 2 13			N N	CONN. MONITOR CONN. VU PANEL, AUDIO		
	<u></u>				-		N			
-PHISC1			92	2 16	-			CONN. VU PANEL, AUDIO		
-PHISC2	S		92	2 14	-		N	CONN. VU PANEL. AUDIO		
-PHOUT1	1		36 <b>4</b> 0	1 4 2 11			L N	CONN. HEAD PHONES CONN. MONITOR		
	2			1 3	-		L	CONN. HEAD PHONES		
	2		40	2 7	_		N	CONN. MONITOR		
-PHSW1A			40	2 9			N	CONN. MONITOR		
-PHSW18			40	2 10	-		N	CONN. MONITOR		
-PHSW2A			40	2 5	-		N	CONN. MONITOR		
-PHSW2B			40	2 6	-		N	CONN. MONITOR		
					-			PULL TON DOUGOTHO CULTOU		
-PHTM1	0		1	15 1			L	PHANIUM PUWERING SWITCH		
	TUDER AC ************************************	****	40 	G N A	*** 07	*****	W I R E L ***********************************	* 88/03/21 * * * * * * * * * * * * * * * * * * *	* 13:38 * ***********************************	PAGF 37
**************************************	0  TUDER AC ******** 1.727.	010	40 	3 4  G N A ***********************************	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH	* 13:38 * ***********************************	PAGF 37
************	0  TUDER AC ******** 1.727.	010	40 ********* * S I ********** .00 * STU **********	3 4 ********* G N A ********** JDER A & ********	*** C7 ***	**** * T.	N R E L R P R P R P R P R P R P R P R P R P R	CONN. PHANTON POWERING SWITCH  I S T * 88/06/09  * 88/03/21	* 13:38 * ********** - 01 ******	PAGF 37 **********************
************  WILLI SI  **********************************	0  ******** ******* 1.727. *******	010	40 ************************************	3 4 ********* G N A ********** JDER A & ********	*** C7 ***	**** * T.	N I R E L	CONN. PHANTON POWERING SWITCH  I S T * 88/06/09  * 88/03/21	* 13:38 * ********** - 01 ******	PAGF 37 **********************
*********** ********** ***************	0  TUDER AC ******** 1.727. ******** COLOR  8 8	010	40	3 4 ************************************	*** C7 ***	**** * T.	N I R E L APPERCORDER	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  * 88/03/21  DESCRIPTION OF ELEMENT  PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH  PHANTOM POWERING SWITCH	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  WILLI SI ***********************************	0  TUDER AC ************************************	010	40	3 4 ************************************	*** C7 ***	**** * T.	N R E L R PER RECORDER  TYPE L N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  * 88/03/21  DESCRIPTION OF ELEMENT  PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH  PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  WILLI SI ***********************************	0  ********* *********************	010	40	3 4 ************************************	*** C7 ***	**** * T.	W I R E L APPE RECORDER  TYPE L N L N A L	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  * 88/03/21  DESCRIPTION OF ELEMENT  PHANTOM POWERING SWITCH  PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH  CONN. EXT. VU PANEL, AUDIO  MONITOR VOLUME POTM.	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  WILLI SI ***********************************	0  TUDER AC ************************************	010	40	3 4  **********  G N A  ********  *******  *******  ********	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N A L N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ** 88/06	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  WILLI SI ***********************************	0  ********* *********************	010	40	3 4  G N A  *********  G N A  *********  *********  *********  *****	*** C7 ***	**** * T.	N R E L  TYPE L N L N L N N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
************  WILLI SI ***********************************	0  ********* *********************	010	40	3 4  *********  G N A A  *********  ELM PNT  15 2 3 3  15 3 1  7 18 2 10 2 19 21 4 22 4 13	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  WILLI SI ***********************************	0  *******************************	010	40	3 4  *********  G N A  **********  ELM PNT  15 2 3 3  17 18 2 10  2 19  21 4  24 13  31 1  11 4  14 13  31 1	*** C7 ***	**** * T.	N R E L R R R R R R R R R R R R R R R R R	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
***********  #ILLI 51  ***********  IGNAL NAMEPHTM2PHTM3PREGUI	O	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3 3  17 18 2 10 2 19 21 4 24 13 31 1 11 4 11 4 13 1 1 2 3	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N L N N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ** 88/06	* 13:38 * ********** - 01 ******	PAGF 37 *******************
##**********  #ILLI 51  ************  IGNAL NAME PHTM2 PHTM3 PREOU1	O	010	40	3 4  *********  G N A  *********  *********  *********  *****	*** C7 ***	**** * T.	TYPE  L N A L N N N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ** 88/06	* 13:38 * ********** - 01 ******	PAGF 37 *******************
##**********  #ILLI 51  ************  IGNAL NAME PHTM2 PHTM3 PREOU1	0 	010	40	3 4  *********  G N A A  ********  ********  ********  *******	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  IST *88/06/09  *88/03/21  DESCRIPTION OF ELEMENT  PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH  CONN. PHANTOM POWERING SWITCH  CONN. EXT. VU PANEL, AUDIO MONITOR VOLUME POTM. CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CILC, J31 CONN. AUDIO CTL, J31 CONN. EXT. VU PANEL, AUDIO  CONN. HONITOR CONN. HONSERT, INPUT CIRCUIT	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  #ILLI 51  ***********  IGNAL NAMEPHTM2PHTM3PREGUI	O	010	40	3 4  *********  G N A A  *********  ELM PNT  15 2 3 3  15 3 3  1 2 10  2 10  2 19  21 4  24 13  31 1  11 4  14 13  31 1  2 3 3  7 25 2  8 2  3 31 7  41 4  44 13	*** C7 ***	**** * T.	N	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
***********  #ILLI 51  ***********  IGNAL NAMEPHTM2PHTM3PREGUI	O	010	40	3 4  *********  G N A A  *********  *********  ELM PNT  15 2 3 3  15 3 3  17 18 2 10  2 19  21 4 3  31 1  11 4 3  7 25 2 8  2 3  7 25 2 8  2 3 3  7 4 4 4 13  11 4 13  11 4 13	*** C7 ***	**** * T.	N R E L R R R R R R R R R R R R R R R R R	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
*************  WILLI SI  ***************  IGNAL NAME	O	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3 3  17 18 2 10 2 19 21 4 24 13 31 1 11 4 11 4 14 13 31 1 2 3 3 7 25 2 8 2 3 3 3 1 7 41 4 44 13 11 4 14 13 11 14 13 13 11 4	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N N N N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ** 88/06	* 13:38 * ********** - 01 ******	PAGF 37 **********************
***********  ***********  IGNAL NAMEPHTM2PHTM3PREOU1	O  ********* ******* *******  ******	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3 3  15 3 1  7 18 2 10 2 19 21 4 24 13 31 1 11 4 11 4 11 4 11 4 11 4 11 4	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
**********  **********  IGNAL NAMEPHTM2PHTM3PREGU1PREGU1	O	010	40	3 4  *********  G N A A  *********  ELM PNT  15 2 3 3  15 3 3  17 18 2 10  2 19  21 4 3  31 1  11 4  12 3  7 25 8  2 3  31 7  41 4 13  31 7  41 4 13  31 7  41 4 13  31 7  41 4 13  31 7  41 4 13  31 7  41 4 13  31 7  41 4 13  41 13  41 13  41 13  41 13  41 2 3	*** C7 ***	**** * T.	N	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
************  #ILLI SI ***********  IGNAL NAMEPHTM2PHTM3PREOU1PREOU1	O  ********* ******* *******  ******	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3  15 3 3  15 3 3  17 18 2 10  2 19  21 4 3  31 1  11 4 13  31 7  2 5 8  2 8  2 3  3 1 7  444 13  11 4 3  31 7  2 10  2 11  3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	*** C7 ***	**** * T.	N	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
**************************************	O	010	40	3 4  **********  G N A  *********  ELM PNT  15 2 3 3  15 3 3  15 2 10  2 19  21 4 13  31 1  11 4 13  31 7  25 2 8  2 3  7 25 8  2 4 14 4  4 13  11 4 13  31 7  2 11  2 11  2 11  2 11  2 2 1  3 3 1 7  4 14 13  4 14 13  4 13 1 7  4 14 13  4 14 13  4 17 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 14 14  4 17 14 14 14  4 17 14 14 14  4 17 14 14 14  4 17 17 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4	*** C7 ***	**** * T.	N R E L PPE RECORDER  TYPE L N L N N N N N N N N N N N N N N N N	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
**************************************	O	010	40	3 4  **********  G N A  *********  ELM PNT  15 2 3 3  15 3 3  15 2 10  2 19  21 4 13  31 1  11 4 13  31 7  25 2 8  2 3  7 25 8  2 4 14 4  4 13  11 4 13  31 7  2 11  2 11  2 11  2 11  2 2 1  3 3 1 7  4 14 13  4 14 13  4 13 1 7  4 14 13  4 14 13  4 17 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 13  4 17 14 14 14 14  4 17 14 14 14  4 17 14 14 14  4 17 14 14 14  4 17 17 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4 17 14 14  4	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N A L N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
######################################	O	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3  15 3 3  17 18 2 10 2 19 221 4 24 13 31 1 11 4 14 13 31 1 2 3 3 11 4 14 14 13 31 7 2 5 2 8 2 13 31 7 41 4 41 4 41 4 41 4 41 4 41 4 41 4 4	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N N N N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ** 88/06	* 13:38 * ********** - 01 ******	PAGF 37 **********************
######################################	O	010	40	3 4  *********  G N A  *********  ELM PNT  15 2 3 3 3  15 3 3 1  7 18 2 10 2 19 21 4 42 13 31 1 11 4 13 31 7 25 2 8 3 31 7 414 13 31 7 27 25 2 8 31 7 41 4 13 31 7 2 10 2 10 2 10 2 10 2 10 2 10 2 10 2 10	*** C7 ***	**** * T.	N	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
**************************************	O	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3  15 3 3  1 2 10  2 19  21 4 13  31 1  11 4 13  31 1  2 2 3  7 25  2 8 3  31 7  41 4 13  31 7  2 5 2 8  3 1 7  4 14 13  31 7  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  3 1 1  4 1 1  5 2 3  7 2 5  7 2	*** C7 ***	**** * T.	N PERCORDER  TYPE  L N L N N N N N N N N N N N N N N N N	CONN. PHANTON POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 *******************
######################################	O	010	40	3 4  **********  G N A  *********  ELM PNT  15 2 3 3  1 7 18 2 10  2 19 21 4  24 41 13  31 1 4  14 14 13  31 1 7  2 8 2 3  31 7  41 4 13  31 1 7  2 10  3 1 1 1 4  4 1 1 3  3 1 7  4 1 2 1  3 1 4  4 1 3 3  4 1 3 3 1  4 1 3 3 1  5 2 1 1  6 3 1 9  7 2 1 2  7 2 1 2  7 2 1 2  7 2 1 2  7 3 1 4  7 2 1 1  8 1 3 1 9  9 2 3 4	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N A L N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
######################################	O	010	40	3 4  **********  G N A  *********  ELM PNT  15 2 3 3 3  15 3 3 1  7 18 2 10 2 19 21 4 4 13 31 1 1 2 3 3  7 25 2 8 2 4 3 3 31 1 11 4 4 14 13 11 4 13 31 1 2 2 10 2 19 2 1 4 4 4 13 11 4 13 11 4 14 13 11 4 13 11 4 14 14 13 11 14 14 14 13 11 14 14 14 13 11 14 14 14 14 13 11 14 14 14 14 14 13 11 14 14 14 14 14 14 14 14 14 14 14 14 1	*** C7 ***	**** * T.	W I R E L PPE RECORDER  L N L N A L N N N N N N N N N N N N N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
######################################	O	010	40	3 4  **********  G N A  *********  ELM PNT  15 2 3 3 3  15 3 3 1  7 18 2 10 2 19 21 4 4 24 13 31 1 2 3 3  11 4 13 31 1 2 3 3  7 25 2 3 31 1 11 4 4 14 13 31 1 2 2 1 2 1 4 14 13 31 1 2 1 1 3 1 4 14 13 31 1 3 1 7 2 1 1 3 1 4 3 1 1 4 1 4 3 1 7 2 1 1 3 1 4 3 1 7	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  I S T * 88/06/09  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
IGNAL NAMEPHTM2PHTM3PREOU1PREOU2PROSC1PROSC2RECIN1RECIN2	O	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3  15 3 3  15 2 10  2 19  21 4 13  31 1  11 4 13  31 7  22 8 3  31 7  414 13  31 7  2 9  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  2 10  3 10  3 10  4 10  4 1	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
IGNAL NAMEPHTM2PHTM3PREOU1PREOU2PROSC1PROSC2RECIN1RECIN2	O	010	40	3 4  **********  G N A  *********  ELM PNT  15 2 3 3  15 3 1  7 18 2 10  2 19 21 4  24 4 13  31 1 4  14 13  31 1 7  42 4 13  31 1 7  42 4 13  31 1 7  43 4 7  33 9  43 4 7  34 9  43 4 7  34 9  43 4 7  34 9  43 4 7  34 9  43 4 7  34 9  43 4 7	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
-PREOUZ -PROSC1 -PROSC2 -RECIN2 -SECRP2	O	010	40	3 4  **********  G N A  **********  ELM PNT  15 2 3 3 3  15 3 3 1  7 18 2 10  2 19 21 4  24 13 31 1  11 4 14 13 31 7  2 18 2 3  7 2 5 2  3 3 1 7 4  4 14 13 13 1  1 2 3  7 2 5 2  1 3 1 1 4  2 1 1 2 3  7 2 5 2  8 2 3 3 1 7  4 1 4 13 1  1 1 4 13 3  3 1 7  4 1 3 1 9  4 2 1 1  3 1 9  4 2 1 1  3 1 9  4 2 1 1  3 1 9  4 3 4 7  3 3 4 9  4 3 4 7  3 4 9  4 3 4 7  3 4 9  4 3 4 9	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 **********************
######################################	O	010	40	3 4  **********  G N A A  *********  ELM PNT  15 2 3 3 3  15 3 3 1  7 18 2 10  2 19  21 4 4  13 31 1  2 3 3  11 4 13  31 1  2 3 3  17 18 2 10  2 19  2 1 4 13  3 1 1  2 2 1 4  2 1 2 1  3 1 4 1  3 1 7 2 5 2  3 3 1 7 1  4 1 4 3 1  4 1 4 3 1  7 2 5 2  8 3 3 1  7 2 5 2  8 3 3 1  7 2 5 2  8 3 3 1  7 2 5 2  8 3 3 1  7 2 1 1  1 4 3 1  2 1 3 1  2 1 3 1  3 1 7  2 1 1  3 1 7  3 1 7  3 1 9  4 2 1 2  4 2 1 2  4 3 3 3 4 7  3 3 4 7  3 4 9  4 1 3 4 9  4 4 1 3 4 9  4 4 1 3 4 9  4 4 1 3 4 9  4 4 1 3 4 9  4 4 1 3 4 9  4 4 1 4 9  4 4 1 4 9  4 5 1 6 7  4 7 7 8 9  4 8 9  4 9  4 9  4 9  4 9  4 1 9  4 9  4 1	*** C7 ***	**** * T.	N	CONN. PHANTOM POWERING SWITCH  ***********************************	* 13:38 * ********** - 01 ******	PAGF 37 ********************

IGNAL NAME	COLOR	MI	ASY GRP E	LM PNT	S	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
A-TAPOU2			40 3: 40 4: 42 1: 45 3:	4 14 4 14	_		N N N	CONN. INSERT, OUTPUT CIRCUIT CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44 CONN. AUDIO CTL, J36			
A-VUMTR1	1			5 1 7 4	-		Y N	CONN. VU-INPUT CH1 CONN. LINE OUTPUT CONNECTOR, C	H1		
A-VUMTR2	1 1			6 1 7 4	-		Y N	CONN. VU-INPUT CH2 CONN. LINE OUTPUT CONNECTOR, C	H2		
ACA-17N	2 2		5	4 12 1 3	-		L N	SECCNDARY 2 CONN. TRANSFORMER	P04 J01		
ACA-17P	3		5	4 13 1 2	-		L N	SECONDARY 2 CONN. TRANSFORMER	P04 J01		
CA-20	1		5	4 11 1 1	-		L N	SECONDARY 2 CONN. TRANSFORMER	P04 J01		******
ICA-36	4		5	4 14	-		L N	SECCNDARY 2	P04 J01		
ACA-40	0		5	1 13	-		L	SECONDARY 2	P04		
	0		6	1 11 1 12			N	CONN. TRANSFORMER CONN. TRANSFORMER	J01		
AC B-1 7N	7 7 			3 17 1 7			L N	SECONDARY 1 CONN. TRANSFORMER	P03 J01		
AC B-1 7P	6			3 16 1 8	_		L N	SECONDARY 1 CONN. TRANSFORMER	P03 J01		
AC B-20	8			3 18 1 9	_		L N	SECONDARY 1 CONN. TRANSFORMER	P03 J01		
AC 8-36	5			3 15 1 10	_		Ł N	SECONDARY 1 CONN. TRANSFORMER	J01		
AC B-40	9		6	3 19 1 4 1 5	-		L	SECONDARY 1 CONN. TRANSFORMER CONN. TRANSFORMER	P03 J01 J01		
ACC-17N	4			3 12 4 17	_		L	SECONDARY 1 SECONDARY 2	P03		
ACC-17P	4			3 13 4 16	-		L	SECONDARY 1 SECONDARY 2	P03		
ACC-20	4 4			3 11 4 18	-		L L	SECONDARY 1 SECONDARY 2	P03		
ACC-36					-						
************  * WILLI S		G 4	5  ********** * S I ******	****	**** A L *****	***	**************************************	L I S T * 80/ ************************************	/06/09 ******* /03/21 -		PAGF 39
*****	TUDER A	G * **** * 010	5  ********** * S I ******	4 15 	**** 807 ****	***	************* APE RECORDER	**************************************	P04  *******************************	* 13:38 * ********** - 01	PAGF 39
********* * WILLI S ********* *************	TUDER A ****** 1.727 *****	G * **** * 010	5	4 15 ****** G N ****** ER A ******  ******  *******  *******  3 10	**** 807 ****	**** * T ****	*************** APE RECORDER **********	**************************************	P04  *******************************	* 13:38 * ********* - 01 ******	PAGF 39 **********************
********** WILLI S ***********	TUDER A ****** 1.727 ******  COLGR 4	G * **** * 010	5	4 15  *******  G N  *******  ER A  ******  4 19  2 4	807 *****	**** * T ****	***************  APE RECORDER  ******************************  TYPE  L  N N	********************************  L I S T * 68  *********************************	P04 	* 13:38 * ********* - 01 ******	PAGF 39 ***********************
********** * WILLI S ** ** ****************************	TUDER A ****** 1.727 ******  COLOR 4 4 9	G * **** * 010	5	4 15  ******  G N  EER A  *******  3 10  4 19  2 4 1 5	807 *****	**** * T **** LV 	************  APE RECORDER  ***************  TYPE  L  N N N N	****************************** L I S T * 60 **********************************	P04 06/09 ******** 03/21 - ******* P03 P04	* 13:38 * ********* - 01 ******	PAGF 39 ***********************
**********  *********  *********  SIGNAL NAME  ACC-40  AN-TIENS	TUDER A ******  1.727 ******  COLOR	G * **** *010. ****  MI	5	4 15  *******  G N  ER A  ******  LM PNT  3 10  4 19  2 4  1 5  10 6  1 3	807 ***** [ S	****  * T  ****  L V	************  APE RECORDER  ***************  TYPE  L  L  N  N  N  N  N	**************************************	P04	* 13:38 * ********* - 01 ******	PAGF 39 ***********************
**********  *********  * *********  * ****	TUDER A ******* 1.727 *******  COLOR 4 4 9 9 1	G * **** *010. ****  MI	5	*******  G N  *******  BER A  *******  ******  ******  *****  ******	***** 807 ***** [ S	****  * T  ****  L V	**************************************	************************************  LIST * 80  *********************************	P04  ******* **06/09  *******  P03/21   P03  P04  J10  J10	* 13:38 * ********* - 01 ******	PAGF 39 ***********************
**********  **********  *********  *****	TUDER A ******** 1.727 *******  COLOR	G * **** *010. ****  MI	5	*******  G N  *******  ELM PNT  3 10  4 19  2 4  1 5  10 6  1 3  10 7  1 2  10 1  1 14	***** 807 ***** S	****  * T ****  L V	**************************************	*******************************  L I S T * 68/ ************************************	P04	* 13:38 4 ********* - 01 **********  REMARK	PAGF 39 **************** ************* FLEMFNT NR.
**********  * WILLI S  *********  * WILLI S  *********  * SIGNAL NAME  ACC-40  AN-TTENS  AS-CLK  AS-DATA  AS-FAD	TUDER A ****** 1.727 *******  COLOR 4 4 9 9 6 6 7 7 1 1 8 8 9	G * **** *010. ****  MI	5 5 5 5 5 5 1 1 3 10 1 40 1 40 1 40 1 40 1 10 1 1 40 1 10 1 1 40 1 10 1 1 1 1	4 15  *******  G N  *******  PER A  ******  3 10  4 19  2 4 1 5  10 6 1 3  10 7 1 2  10 1 1 14 10 8 1 19 10 9	***** 807 *****	*** T ** * L V	************  APE RECORDER  *************  TYPE  L  N N N N N N N N N N N N N N N N N	*******************************  L I S T * 68  *********************************	P04 ******* *06/09 ******* P03/21 - ****** P03 P04 J02 J10 J10 J10	* 13:38 4 ********* - 01 **********  REMARK	PAGF 39 ***************** FLEMFNT NR.
**********  * WILLI S  *********  * SIGNAL NAME  ACC-40  AN-TTENS  AS-CLK  AS-DATA	TUDER A ******  1.727 *******  COLOR	G * **** *010. ****  MI	5	*******  G N  ******  ER A  *****  10  4 19  2 4  1 5  10  6 1 3  10  7 1 2  10  11  14  10  8 1  1 19  10  9 1  16  10  5	***** 807  *****  [ S	*** T ** * L V	**************************************	**************************************	P04	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 **************** *************  FLEMFNT NR.
**********  *********  *********  ******	TUDER A ******  1.727 *******  COLOR 4 9 9 6 6 7 7 8 8 9 9 5 5 5	G * **** *010. ****  MI	5	********  G N  *******  ER A  *****  3 10  4 19  2 4 19  2 4 19  1 10  6 1 3  10 7  1 2  10 1  1 14  10 8  1 19  10 9  1 16  10 9  1 16  10 9  1 16	***** 807 ***** [ S	*** T ** * L V	**************************************	****************************** L I S T * 68/ ************************************	P04	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 *****************  ****************  FLEMFNT NR -
*********  * WILLI S  ********  * SIGNAL NAME  ACC-40  AN-TTENS  AS-CLK  AS-DATA  AS-FAD  AS-FAD  AS-FAT  AS-FAT  AS-FAT  AS-FAT  AS-RESET	TUDER A ******  1.727 *******  COLOR 4 9 9 6 6 7 7 8 8 9 9 5 5 5	G * **** *010. ****  MI	5	********  G N  ******  ER A  *****  3 10  4 19  2 4  1 5  10 6  1 3  10 7  1 2  10 1  1 14  10 8  1 19  10 9  1 16  10 5  1 1  10 9  1 16  10 5  10 4  10 9  10 9  10 16  10 5  10 4  10 4  10 4  10 8  10 9  10 9  10 16  10 4  10	***** 807 S	*** T ** * L V	**************************************	********************************  L I S T * 68/ ************************************	P04 ******* *06/09 ******* P03/21 - ****** P04 J02 J10 J10 J10 J10 J10 J10	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 *****************  ****************  FLEMFNT NR.
**********  * WILLI S *********  **********  *GIGNAL NAME  ACC-40  AN-TTENS  AS-CLK  AS-CATA  AS-FAD  AS-FAD  AS-FAD  AS-FAD  AS-FAD  AS-FAD	TUDER A ******  1.727 *******  COLOR	G * **** *010. ****  MI	5	********  G N  *******  ERM PNT  3 10  4 19  2 4 19  10 6 1 3  10 7  1 2  10 1 14  10 8  1 19  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  10 9  10 9  10 9  10 9  10 9  10 9  10 16  10 9  10 16  10 9  10 16  10 9  10 16  10 16  10 17  10 17  10 18	***** 807 S	** * T * L V	**************************************	******************************** L I S T *********************************	P04 ******* *06/09 ******* P03/21 - ****** P04 J02 J10 J10 J10 J10 J10 J10	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 *****************  ****************  FLEMFNT NR.
**********  * WILLI S  *********  ********  ********  ******	TUDER A ******  1.727  *******  COLOR  4 4 4 9 9 6 6 1 1 1 8 8 9 9 4 4 4 4 3 3	G 4*010.	5	********  G N  ******  ER A  *****  4 19  2 4 1 5  10 6 1 3  10 7 1 2  10 1 14  10 8 1 19  10 9 1 16  10 5 1  1 14  10 8 1 19  10 9 1 16  10 1 1  10 9 1 16  10 3 1  10 3 1 14	***** 807  S	** * T * L V	**************************************	************************************  L I S T * 68/ ************************************	P04	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 **************** *************  FLEMFNT NR.
*********  * WILLI S  *********  * ********  * *********  * ******	TUDER A ******  1.727 *******  COLOR	G 4 ***** ***** MI	5	4 15  ********  G N  *******  ELM PNT  3 10  4 19	***** 807	** * T * L V	**************************************	************************************ L I S T * 68 **********************************	P04	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 **************** *************  FLEMFNT NR.
**********  * WILLI S  *********  * WILLI S  *********  * ********  * *********  * ******	TUDER A ******  1.727 *******  COLOR	G 4 ***** ***** MI	5	********  G N  ******  ELM PNT  3 10  4 19  2 4  4 19  1 5  10 6  1 3  10 7  1 1  10 9  1 16  10 9  1 16  10 4  11 14  10 8  1 19  10 4  10 4  10 3  1 4  10 4  11 1	***** 907	**** T** LV	**************************************	******************************** L I S T * 68/ ************************************	P04	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 **************** *************  FLEMFNT NR.
**********  * WILLI S *********  * WILLI S *********  * ********  * *********  * ******	TUDER A ******  ******  COLOR   9  9   1  1  8  8  9  9   4  4	G 4 ***** ***** MI	5	********  G N  ******  ER A  *****  ELM PNT  3 10  4 19  2 4 19  1 10  6 1 3  10 7  1 2  10 1 14  10 8  1 19  10 9  1 16  10 5  1 16  10 9  1 16  10 1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 9  1 16  10 3  10 4  11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	***** 807	**** T** LV	**************************************	**************************************	P04	* 13:38 4 ********* - 01 **********  REMARK	P A G F 39 **************** *************  FLEMFNT NR.
*********  * WILLI S  *********  * ********  * ********  * ******	TUDER A *******  COLOR	G 4 ***** ***** MI	5	********  G N  *******  ER A  ******  1 0 6 1 3  10 7 1 2  1 1 1  1 1 1  1 0 8  1 1 1  1 1 1  1 1 1  1 1 1  1 1 1  1 1 1  1 1 1  1 2 1  1 3 1  1 1  1	**** 807	**** T** LV	**************************************	**************************************	P04	* 13:38 ***********************************	PAGF 39 ****************  *****************  FLEMFNT NR.
*********  * WILLI S  *********  * ********  * ********  * ******	TUDER A *******  COLOR	G 4 ***** ***** MI	5	********  G N  *******  ER A  ******  1 0 6 1 3  10 7 1 2  1 1 1  1 1 1  1 0 8  1 1 1  1 1 1  1 1 1  1 1 1  1 1 1  1 1 1  1 1 1  1 2 1  1 3 1  1 1  1	***** 807  S	**** T** LV	**************************************	**************************************	P04	* 13:38 ***********************************	P A G F 39 **************** *************  FLEMFNT NR.

IGNAL NAME	COLOR	MI	ASY GRP	ELM	PNT	S LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
R-LOCST	8 8		1	4	7		В N	PARALLEL REMOTE CONNECTOR			
R-PLAY	1		10	12 	 15		В	CONN. PARALLEL REMOTE B	J12		~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
	1 1 1		1	5 12 14			B N N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
R-REC	5		1	4 5	9		B B	PARALLEL REMOTE CONNECTOR			
	5		10 10	12	5 5		N N	CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
R-REW	3 3			4 5 12	2 2 3		B B N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B	J12		
0-T2-	3			14 	3  16		N 	CONN. SYNCHRONIZER B	J14		
R-STOP	4 4 4				16		B B N N	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
R-VRSPD	6		1	4	4		В	PARALLEL REMOTE CONNECTOR			
	6 6		1 10 10	5 12 14	4 6 6		B N N	CONN. SYNCHRONIZER CONN. PARALLEL REMOTE B CONN. SYNCHRONIZER B	J12 J14		
-BASS			40		3		Ņ	CONN. AUDIO ELECTRONICS CH1			
			40 41 42	43 13 13	3 3 3		N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J23 CONN. AUDIO CTL. J43			
-BIAS1				22 12	3		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J22			
-BIAS2				42 12	3 3		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J42			
-CALIN1				21 11	5 5		N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL. J21			
-CAL INZ				41 11	5 5		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J41			
-CAL OU1				24 14			N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL. J24			
-C AL OU2				44 14			N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44			
-CUEAT				24			N.	CONN. AUDIO ELECTRONICS CHI			
 *****************************	TUDER AG	* ***	40 41 42  ******** S I	44 14 14  *****	18 18 18 	L *****	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44	'06/09 ******* '03/21 -	* 13:38 * ***********************************	*******
************ ************ ************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42  ******** 5 I ******** 00 * ST *******	44 14 14  G ***** UDER ****	18 18 18 18 N A	L ***** 7 * T *****	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  L I S T 88/ ***********************************	'06/09 ******* '03/21 -	* 13:38 * ***********************************	PAGF 41
************ ************ ************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42  ********* ******** ASY GRP	44 14 14  *************************	18 18 18 	L ***** 7 * T *****	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44	'06/09 ******* '03/21 -	* 13:38 * ********** 01 *******	PAGF 41 *********************
WILLI ST	TUDER AG ******** 1.727.	* **** 010. ***	*********  ********  ASY GRP  40 40 40 40 40 41	*****  G ***** UDER **** ELM 22 43 12	18 18 18 N A ***********************************	L ***** 7 * T *****	**********  W I R E  APE RECORDER  ***********  TYPE  N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J44  LIST 887  EIST 888  * 887  DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CH1 CUNN. AUDIO ELECTRONICS CH1 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J22	'06/09 ******* '03/21 -	* 13:38 * ********** 01 *******	P A G F 41 **********************
************ ************ ************	TUDER AG ******** 1.727.	* **** 010. ***	*********  S I  ********  S I  ********  ASY GRP  40  40  40  40	*****  G ***** UDER **** ELM 22 42 43	18 18 18 N A ******* A 80 ******* 4 6 4	L ***** 7 * T *****	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24  L I S T * 88 ********************************	'06/09 ******* '03/21 -	* 13:38 * ********** 01 *******	P A G F 41 ********************
************ WILLI ST ************ ************ IGNAL NAMEEQA	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 	*****  ****  ****  ****  ELM 22  23  42  43  12  13  12  13	18 18 18 18 N A ***********************************	L ***** 7 * T *****	**********  **********  **********  ****	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	'06/09 ******* '03/21 -	* 13:38 * ********** 01 *******	P A G F 41 *********************
**************************************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 	44 14 14  ***** G # *** ***** **** 22 43 12 13 12 13 12 13 12 13 43	18 18 18 18 N A 80 ******  PNT	L ***** 7 * T *****	***********  # I R E  **********  APE RECORDER  *************  N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	'06/09 ******* '03/21 -	* 13:38 * ********** 01 *******	P A G F 41 **********************
**************************************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 	44 14  ***** G ***** ELM- -22 23 12 13 12 13 12 13 12 13 12 13 12 13 12 13 12 13 12 13 12 13 12 13 14 14 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18	18 18 18 N A ******  A 80 ******  4 6 4 6 4 6 6 4 6 6 6 6 6 6 6 6 6 6 6	L ***** 7 * T *****	***********  W I R E  ***********  APE RECORDER  ************  T-PE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24  L I S T *********************************	'06/09 ******* '03/21 -	* 13:38 * ********** 01 *******	PAGF 41 *********************
**************************************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 	***** G **** ELM 22 23 12 13 12 13 12 13 12 13 12 13	18 18 18 18	L ******* * T ****** S 	************  # I R E  ***********  # PE RECORDER  *************  N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ******* 03/21 - *******	* 13:38 * ********** 01 *******	P A G F 41 **********************
**************************************	TUDER AG ******** 1.727.	* **** 010. ***	######################################	44 14 	18 18 18 N A A 800********************************	L ******* * T ****** S 	**********  W I R E  APE RECORDER  ***********  TYPE  N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ******* 03/21 - *******	* 13:38 * ********* ********** REMARK	P A G F 41 *********************
**************************************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 42 40 40 40 40 41 42 42 42 42 40 40 40 44 45 40 40 40 40 40 40 40 40 40 40 40 40 40	44 14 14  ****** ******* ELM 22 43 112 13  22 43 112 13  23 42 43 112 13  32 35 35 35 35	18 18 18 N A **********************************	L ******* * T ****** S 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ******* 03/21 - *******	* 13:38 * ********* ********** REMARK	P A G F 41 **********************
**************************************	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 42 42 42 42 44 45 5	444 144 144 144 144 147 147 148 148 148 148 148 148 148 148 148 148	18 18 18	L ****** 7* T ******  S LV	************  # I R E  **********  ***********  **********	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ******* 03/21 - *******	* 13:38 * ********* ********** REMARK	P A G F 41 **********************
************  WILLI ST ************  IGNAL NAME  -EQA  -EQB	TUDER AG ******** 1.727.	* **** 010. ***	######################################	444 144 144 14 *************************	18 18 18	L ****** 7* T ******  S LV	**********  **********  **********  ****	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ******* 03/21 - *******	* 13:38 * ********* ********** REMARK	PAGF 41 *********************
************  WILLI ST ************  IGNAL NAME  -EQA  -EQB	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42 42 42 40 40 44 45 5 40 40 44 45 5 40 40 40 44 44 45 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6	444 144 144 144 147 147 147 147 147 147	18 18 18 18 18 18 18 18 18 18 18 18 18 1	L ****** 7* T ******  S LV	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88 ********************************	06/09 ******* 03/21 - *******	* 13:38 * ********* ********** REMARK	P A G F 41 *********************
WILLI ST	TUDER AG ******** 1.727.	* **** 010. ***	40 40 40 40 40 40 40 40 40 40 40 40 40 4	444 14 14 14 14 14 14 14 14 14 14 14 14	18 18 18 18 18 18 18 18 18 18 18 18 18 1	L ****** 7* T ******  S LV	***********  ***********  ***********  ****	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88/  ********************************	06/09 ******* 03/21 - *******	* 13:38 * ********* ********** REMARK	P A G F 41 *********************
WILLI ST	TUDER AG ******** 1.727.	* **** 010. ***	40 41 42	444 144 144 144 147 148 148 148 148 148 148 148 148 148 148	18 18 18	L ****** 7* T ******  S LV	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ************************************	* 13:38 * ********* ********** REMARK	P A G F 41 *********************
######################################	UDER AG ******* 1.727: ********  COLOR	* **** 010. ***	40 41 42 42 42 40 40 44 45 40 40 44 45 40 40 44 45 40 40 44 45 40 40 40 40 40 40 40 40 40 40 40 40 40	444 144 144 ****** ****** ***** ***** **** **** ****	18 18 18 18 18 18 18 18 18 18 18 18 18 1	L ****** 7* T ******  S LV	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ************************************	* 13:38 * ********* ********** REMARK	P A G F 41 *********************
######################################	UDER AG ******* 1.727: ********  COLOR	* **** 010. ***	######################################	444 14 14 14 14 14 14 14 14 14 14 14 14	18 18 18 N A A 800 *******************************	L ****** *****  S LV	***********  ***********  ***********  ****	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88/  ********************************	06/09 ************************************	* 13:38 * ********* ********** REMARK	P A G F 41 *********************
-EQN -EQS -ERASE1 -ERASE2 -INPUT1	UDER AG ******* 1.727: ********  COLOR	* **** 010. ***	40 41 42	444 14 14 14 14 14 14 14 14 14 14 14 14	18 18 18 18 N A 400 N	L ****** 7 * T ******  S LV	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ************************************	* 13:38 * ********* ********** REMARK	P A G F 41 ********************
######################################	UDER AG ******* 1.727: ********  COLOR	* **** 010. ***	######################################	444 14 *****  *****  ****  ****  ****  ****  ****	18 18 18 18 18 18 18 18 18 18 18 18 18 1	L ****** 7 * T ******  S LV	***********  ***********  ************	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J44  L I S T * 88  *******************************	06/09 ************************************	* 13:38 * ********* ********** REMARK	P A G F 41 ***********************

									***********	****		
GIGNAL NAME C-MICATI	COLOR		ASY GRE	P EL! 21		S -	 L V	TYPE N	DESCRIPTION OF ELEMENT  CONN. AUDIO ELECTRONICS CHI		REMARK	ELEMENT NR.
			41	11	3	_		N	CONN. AUDIO CTL, J21			
-MICAT2				41 11				N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J41			
-MICON1				21 11				N N	CONN. AUDIO ELECTRONICS CH1			
-MICON2			40	41 11	7	-		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J41			
-MONOA	4		44	2	4	-		N	CONN. M/S OUTPUT APML.			
	4		45  44			-		L N	CONN. M/S INPUT AMPL. JOI CONN. M/S OUTPUT APML.			
			45 	1 7		-		L 	CONN. M/S INPUT AMPL. JOI CONN. SP. MOTOR FILTER, LEFT	J07		
			12	1	7	-		N	CONN. SP. MOTOR CTL.	P01		
-NAB			40	21 24 41	11			N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CHI CONN. AUDIO ELECTRONICS CH2			
			40 41	44 11	11 2			N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J21			
			42	14	2			N N	CONN. AUDIO CTL, J24 CONN. AUDIO CTL, J41			
				24		-		N 	CONN. AUDIO CTL, J44  CONN. AUDIO ELECTRONICS CH1			
			40 41	44 14	19 19			N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J24			
-REC1				14 22				N N	CONN. AUDIO CTL. J44  CONN. AUDIO ELECTRONICS CH1			
			41	12	19	-		N	CONN. AUDIO CTL, J22			
-REC2				42 12		_		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL. J42			
-REPRO1				23 13				N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23			
-REPRO2				43 13	8 8	-		N N	CONN. AUDIO ELECTRONICS CH2 CONN. AUDIO CTL, J43			
-SECRP1			40	23	9	-		N	CONN. AUDIO ELECTRONICS CH1			
-SECRP2				13 43		-		N 	CONN. AUDIO CTL, J23  CONN. AUDIO ELECTRONICS CH2			
				13	9			N	CONN. AUDIO CTL. J43			
	TUDER AG ******** 1.727.	**** 010	40 41 ********* S *********	23 13 *****	7 ******	A L **** 807	**** * T	W I R E ***********************************	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CT1, J23  L I S T * 8 8	8/06/09 ******* 8/03/21 -	* 13:38 * ********* - 01	PAGF 43
	TUDER AG ******** 1.727. ******	**** 010.	40 41 ******** S *********	23 13 ***** I G ***** TUDER	7 7  ****** R A	A L **** 807 ****	**** * T ****	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  ***********************************	8/06/09 ******* 8/03/21 -	* 13:38 * ********* - 01	PAGF 43 *******
-SYNC1 -***********  #ILLI 5' ***********  ************  IGNAL NAME -SYNC2	TUDER AG ******** 1.727. ********	**** 010.	40 41 ********* 00 * S ********	23 13 ***** I G ***** TUDER	7 7 7  ****** R A . ****** M PNT	A L **** 807 ****	**** * T ****	N N N P E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CT1, J23  ***********************************	8/06/09 ******* 8/03/21 -	* 13:38 * ********** - 01 *******	PAGF 43 **************************
	TUDER AG ******** 1.727. ********	**** 010.	40 41 ******** 00 * S ******** ASY GRI	23 13 ****** I G ****** TUDEF ****** P EL!	7 7 7 ****** R A : ****** M PNT	A L **** 807 ****	**** * T ****	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CF1 CONN. AUDIO CT1, J23  ***********************************	8/06/09 ******* 8/03/21 -	* 13:38 * ********** - 01 *******	PAGF 43 **************************
	TUDER AG ******** 1.727. ********	**** 010.	*********  ********  *******  ASY GRI  40  41  40  41  40  41  40	23 13 ****** I G ****** TUDEF ****** P EL! 43 13	7 7 7 ********************************	A L **** 807 ****	**** * T ****	N N N P E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  ***********************************	8/06/09 ******* 8/03/21 -	* 13:38 * ********** - 01 *******	PAGF 43 **************************
	TUDER AG ******* 1 - 72 7 . ********  COLOR	**** 010.	40 41 ********* S ********* ASY GRI 40 42 	23 13 13 14 14 11 11 24 14 11 12 14 14 11 12 14 14 14 14 14 14 14 14 14 14 14 14 14	7 7 7 ********************************	A L **** 8C7 **** S - -	**** * T **** L V 	N N N F E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  ***********************************	8/06/09 ******* 8/03/21 -	* 13:38 * ********** - 01 *******	PAGF 43 **************************
	TUDER AG ********* 1.727.* ********  COLOR	**** 010.	*********  ********  ********  ASY GRI  40  41  40  41  40  41  40  41  40  41  40  41  40  41  40  41	23 13 13 14 11 G **********************************	7 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	A L **** 8C7 **** - -	**** * T **** L V 	N N N P E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	8/06/09 ******* 8/03/21 -	* 13:38 * ********** - 01 *******	PAGF 43 **************************
	TUDER AG ********* 1.727.* ********  COLOR	**** 010.	*********  ********  ********  ASY GRI  40  42  40  41  40  41  40  42  40  41  40  42	23 13	7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	A L **** 8C7 **** - -	**** * T **** L V 	N N N P E E E E E E E E E E E E E E E E	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  L I S T * 8 8  ******************************	8/06/09 ************************************	* 13:38 * ********** - 01 *******	PAGF 43 **************************
	TUDER AG************************************	**** 010.	*********  ********  ASY GRI  40  41  40  41  40  42  40  41  40  42  20  21	23 13 13 14 14 14 14 14 14 14 14 14 14 15 16 16 17 17 17 17 17 17 17 17 17 17 17 17 17	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  LIST * 8 8  *******************************	8/06/09 *********** 8/03/21 *********	* 13:38 * ********** - 01 *******	PAGF 43 **************************
-SYNC1	TUDER AG************************************	**** 010.	######################################	23 13 13 13 14 15 15 17 10 10 11 11 11 11 11 11 11 12 14 14 14 14 14 14 14 14 14 14 14 14 14	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N F E S S S S S S S S S S S S S S S S S S	CONN. AUDIO ELECTRONICS CH1 CONN. AUDIO CTL, J23  ***********************************	8/06/09 ******** 8/03/21 - *******  J03	* 13:38 * ********** - 01 ***********  REMARK	PAGF 43 **************************
- SYNC1	TUDER AG************************************	**** 010.	*********  ********  ASY GRI  40 41 40 42 40 41 40 41 66 67 66 66	23 13 13 14 14 14 14 14 14 14 14 14 14 14 14 14	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	8/06/09 ********  8/03/21 *******  J03 J03 J03 J03 J02 J03 J03	* 13:38 * ********** - 01 ***********  REMARK	PAGF 43 **************************
	TUDER AGE ***********  COLOR 8 8 8 7	**** 010.	*********  ********  ASY GRI  40  41  40  41  40  42	23 13 13 11 I G G G G G G G G G G G G G G G G G	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	8/06/09 **********  8/03/21 ********  J02 J03	* 13:38 * ********** - 01 ***********  REMARK	PAGF 43 **************************
	TUDER AG************************************	**** 010.	######################################	23 13 13 11 11 11 11 11 24 14 14 14 14 14 14 14 14 14 14 14 14 14	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	8/06/09 ********* 8/03/21 ********  J02 J03 J03 J03 J02 J03 J02 J03 J02 J03 J03	* 13:38 * ********** - 01 ***********  REMARK	PAGF 43 **************************
-SYNC1	TUDER AG************************************	**** 010.	*********  ********  ASY GRI  40  41  40  42  40  41  40  42  66 67 7  66 66 67	23 13 13 11 11 11 11 11 11 12 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 ****************************
	TUDER AG************************************	**** 010.	*********  ********  ASY GRI  40  41  40  42	23 13 13 11 11 11 11 22 44 14 14 14 14 14 15 2 2 2 3 3 2 2 2 3 3 3 3 3 3 3 3 3 3 3	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 ****************************
-SYNC1	TUDER AG************************************	**** 010.	*********  ********  ASY GRI  40  41  40  41  40  41  40  41  40  41  66 67 7  66 67 7  66 66 77  66 66 67	23 13 13 11 11 11 11 22 44 14 14 14 14 14 12 23 3 2 2 2 3 3 3 3 2 2 2 3 3 3 3 2 2 2 3 3 3 3 3 2 2 2 3 3 3 3 3 2 2 2 3	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L **** 8C7 **** - -	**** * T **** L V 	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	8/06/09 ********  8/03/21 - *******  J03  J03  J03  J03  J03  J03	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 **************************
	TUDER AG************************************	**** 010.	*********  ********  ASY GRI	23 13 13 13 13 13 13 13 13 13 13 13 13 13	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L *** *** *** ** ** ** ** ** ** ** ** **	**** * T **** L V 	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 **************************
-SYNC1	TUDER AG************************************	**** 010.	*********  ********  ASY GRI	23 13 13 11 11 11 11 11 11 11 11 12 44 14 14 14 14 14 14 14 14 14 14 14 14	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L & & & & & & & & & & & & & & & & & &	***** LV	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 **************************
-SYNC1	TUDER AGENTAL AND AGENT	**** 010.	*********  ********  ASY GRI	23 13 3 4 4 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L & & & & & & & & & & & & & & & & & &	***** LV	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 **************************
-SYNC1	TUDER AG************************************	**** 010.	*********  ********  ASY GRI	23 13 13 14 11 11 11 22 44 14 14 14 14 14 15 22 33 22 23 34 44 17 22 23 34 44 17 22 23 34 44 17 24 17 25 17 26 17 27 27 27 27 37 37 47 17 17 17 17 17 17 17 17 17 17 17 17 17	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L & & & & & & & & & & & & & & & & & &	***** LV	N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 **************************
-SYNC1	TUDER AGENTAL AND AGENT	**** 010.	*********  ********  ASY GRI	23 13 3 4 4 4 14 1 4 1 4 1 4 1 4 1 4 1 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L & & & & & & & & & & & & & & & & & &	***** LV	N N N I R E *********************************	CONN. AUDIO ELECTRONICS CHI CONN. AUDIO CTL, J23  ***********************************	######################################	* 13:38 * ********** - 01 **********  REMARK	PAGF 43 **************************

DS-ENLED 2 2 ERAHH-01 1 1 ERAHH-02 3 3 ERAHL-01 9 ERAHL-02 2 EXT-CLK 1 1 EXT-DATA 3 3 EXT-D5 5 5 EXT-D6 6 6 EXT-D7 7 7 EXT-ENLD 9 9 EXT-FAD F-ACA40 8 F-LINE1 1 FAD1 1 FAD2 2 2 ETACHED 1 FAD2 2 2 EXT-CLE 1 E	10 9 12 30 3 13  39 1 10 41 4 3  39 1 23 42 4 3  39 1 22 42 4 5  1 6 11 10 8 8 92 1 6  1 6 5 10 8 6 92 1 3  1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 6 7 10 8 8 9 1 1 1  1 6 5 12 1 8 9 1 1 6 5 12 1 6 5 12 1 6 5 12 1 7 8 1 8 1 1 1 8 1 2 1 1 5 2 1 1	B N N N N N N N N N N N N N N N N N N N	CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. EXT. VU PANEL. CTL CONN. EXT. VU PANEL CONN. YU PANEL, CTL CONN. EXT. VU PANEL CONN. YU PANEL, CTL CONN. EXT. VU PANEL	708 708 708 708 708 708		
ERAHH-01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	39	B N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. EXT. VU PANEL. CTL CONN. EXT. VU PANEL	708 708 708 708		
ER AHH-02 3 3	39	B N N N N N N N N N N N N N N N N N N N	CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. EXT. VU PANEL, CTL CONN. EXT. VU PANEL CONN. EXT. VU PANEL, CTL CONN. EXT. VU PANEL	708 708 708 708		
3	42 4 3  39 1 9 41 4 5  39 1 22 42 4 5  1 6 11 10 8 8 92 1 6  1 6 10 10 8 7 92 1 5  1 6 6 5 10 8 5 92 1 2  1 6 6 7 10 8 3 92 1 3  1 6 7 10 8 3 92 1 1  1 6 12 10 8 9 92 1 4  10 8 1  6 5 12 8 1 1  6 5 12 8 1 1	B N N N N N N N N N N N N N N N N N N N	CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. EXT. VU PANEL. CTL CONN. EXT. VU-PANEL CONN. VU PANEL, CTL  CONN. EXT. VU-PANEL	708 708 708 708		
9 ERAHL-02 2 2 EXT-CLK 1 1 1 1 EXT-DATA 3 3 3 EXT-D5 5 5 EXT-D6 6 6 6 EXT-D7 7 7 7 EXT-ENLD 9 9 9 EXT-FAD 1 E-ACB40 8 1 E-ACB40 1 8 E-LINE1 1 1 E-ACB41 1 1 E-ACB41 1	1 6 11 1 6 12 1 6 5 12 1 6 5 12 8 1 1 1 5 1 1 5 1 1 6 1 1 1 1 6 1 1 1 1 6 5 1 1 1 8 1 2 1 1 1 5 1 1 1 5 1 1 1 1 1 1 1 1 1 1	N	CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL CONN. VU PANEL, CTL  CONN. EXT. VU PANEL	708 708 708 708		
2  EXT-CLK  1  1  1  EXT-DATA  3  3  3  EXT-D5  5  5  EXT-D6  6  6  EXT-D7  7  7  7  EXT-ENLD  9  9  EXT-FAD	1 6 11 10 8 8 92 1 6 1 6 10 10 8 7 92 1 5 1 6 5 10 8 5 92 1 2 1 6 6 10 8 4 92 1 3 1 6 7 10 8 3 92 1 1 1 6 7 10 8 3 1 6 7 10 8 3 1 7 1 8 3 1 9 2 1 1 1 1 6 12 1 0 8 9 1 0 8 1 1 0 8 1	N	CONN. HEAD BLOCK, RECORD  CONN. EXT. VU PANEL, CTL CONN. EXT. VU PANEL	708 708 708 708		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 8 8 8 92 1 6 10 10 8 7 92 1 5 11 8 1 2 1 5 1 1 8 1 2 1 5 1 1 1 5 1 1 1 5 1 1 1 5 1 1 1 5 1 1 1 1 5 1 1 1 1 5 1	N	CONN. EXT. VU-PANEL CONN. EXT. VU PANEL, CTL CONN. EXT. VU-PANEL	708 708 708 708		
3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1 6 10 10 8 7 92 1 5 10 8 5 92 1 2 11 6 6 10 8 4 92 1 3 11 6 7 10 8 3 92 1 1 11 6 12 10 8 9 92 1 4 10 8 1 6 5 12 8 1 1 6 5 12 8 1 1 1 6 5 12 1 8 1 2 1 1 5	B N N N N N N N N N N N N N N N N N N N	CONN. EXT. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. VY PANEL, CTL  CONN. EXT. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. YU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL CONN. VU PANEL CONN. YU PANEL CONN. EXT. VU-PANEL	80L 80L 80L		
XT-D5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	1 6 5 10 8 5 92 1 2  1 6 6 10 8 4 92 1 3  1 6 7 10 8 3 92 1 1  1 6 12 10 8 9 92 1 4  10 8 1  6 5 12 8 1 1  6 5 12 8 1 1  6 5 12 8 1 1	B N N N N N N N N N N N N N N N N N N N	CONN. VU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU-PANEL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL  CONN. VU PANEL  CONN. EXT. VU-PANEL  CONN. EXT. VU-PANEL	80L 80L 80L		
5	92 1 2  1 6 6 10 8 4 92 1 3  1 6 7 10 8 3 92 1 1  1 6 12 10 8 9 92 1 4  10 8 1  6 5 12 8 1 1  6 5 12 8 1 1  1 1 5	N N N N N N N N N N N N N N N N N N N	CONN. VU PANEL, CTL  CONN. EXT. VU PANEL, CTL  CONN. EXT. VU PANEL	90L 80U 90L		
XT-D7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	10 8 4 92 1 3  1 6 7 10 8 3 92 1 1  1 6 12 10 8 9 92 1 4  10 8 1  6 5 12 8 1 1  6 5 12 8 1 1	B N N N	CONN. EXT. VU-PANEL CONN. VU PANEL. CTL CONN. EXT. VU PANEL. CTL CONN. EXT. VU-PANEL CONN. VU PANEL, CTL CONN. EXT. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. EXT. VU-PANEL CONN. EXT. VU-PANEL	80L		
77 77 XT-ENLD 99 9 XT-FAD	10 8 1 10 8 1	В N N N	CONN. EXT. VU-PANEL CONN. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. EXT. VU-PANEL CONN. EXT. VU-PANEL CONN. EXT. VU-PANEL	8 Of		
XT-ENLD 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	1 6 12 10 8 9 92 1 4 10 8 1 6 5 12 8 1 1 6 5 11 8 1 2	B N N	CONN. EXT. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. VU PANEL, CTL CONN. EXT. VU-PANEL CONN. RECTIFIER DZ2			
-ACA40 8 1	92 1 4 10 8 1 6 5 12 8 1 1 6 5 11 8 1 2 1 1 5	N	CONN. VU PANEL, CTL  CONN. EXT. VU-PANEL  CONN. RECTIFIER DZ2			
-ACA40 8 1	6 5 12 8 1 1 6 5 11 8 1 2	J V	CONN. RECTIFIER DZ2	A O I.		
1	8 1 1 6 5 11 8 1 2 1 1 5	<del>'</del> '				
8	8 1 2 - 1 1 5	) A				
1 AD1 1			CONN. RECTIFIER DZ2 RECTIFIER DZ2			
1		J	CONNECTOR POWER INPUT POWER SWITCH	P01		
AD2 2 2	$\begin{array}{cccc} 1 & 4 & 11 \\ 10 & 11 & 1 \end{array}$	B N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A	J11		
	1 4 12 10 11 2	B N	PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A	J11		
IGNAL NAME COLOR MI ND 5-4	R MI ASY GRP ELM PNT S	LV TYPE	DESCRIPTION OF ELEMENT CONNECTOR POWER INPUT	P01	REMARK	ELEMFNT NR.
		Y	CONN. GROUND CONN. GROUND (TP 12)			
ALL1A 7 7	20 3 4 21 2 4	N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3			
ALL 1B 8 8	20 3 5 21 2 5	N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3	J03		
		N				
ALL 2A 5 5	20 3 6 21 2 6	N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3	J03		
ALL 2A 5	20 3 6 21 2 6	N	CONN. CAPSTAN TACHO	FOT		
ALL2A 5 5 5 5 6 6 6 6 ALL3A 3	20 3 6 21 2 6 20 3 7 21 2 7	N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO			
ALL2B 6 6 ALL3A 3 3	20 3 6 21 2 6 	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO	T03		
ALL2A 5 5	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 20 3 9 21 2 9	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER	J03		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 3 ALL3B 4 4 R-REFEX 3 3 3 3	20 3 6 21 2 6 20 3 7 21 2 7 21 2 8 21 2 8 21 2 8 20 3 9 21 2 9 1 4 13 1 5 13 10 11 3 10 11 3	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR	J03		
ALL2A 5 5	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 21 2 9 1 4 13 1 5 13 10 11 3 10 13 3 10 7 1 25 1 1	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A  CONN. SULENOIDS CONN. TAPE DECK CTL. JO7	J03 J03 J03 J03 J03 J03 J07		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 3 ALL3B 4 4 R-REFEX 3 3 3 3 -BRAKE 1 1	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 21 2 9 1 4 13 1 5 13 10 11 3 10 13 3 10 7 1 25 1 1	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A	J03 J03 J03 J03 J03 J03 J07		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 3 ALL3B 4 4 R-REFEX 3 3 3 -BRAKE 1 1 -LIFT 8 8	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 20 3 9 21 2 9 1 4 13 1 5 13 10 11 3 10 13 3 10 7 1 25 1 1 10 7 3 27 1 2	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A  CONN. SOLENDIDS CONN. TAPE DECK CTL. JO7  CONN. SGLENDIDS CONN. TAPE DECK CTL. JO7	J03 J03 J11 J13 J07		
ALL 2A 5 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 21 2 9 21 2 9 1 4 13 1 5 13 10 13 3 10 13 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A  CONN. SQLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SGLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7	J03 J03 J03 J11 J13 J07 J07		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 3 ALL3B 4 4 R-REFEX 3 3 3 -BRAKE 1 1 -LIFT 8 8 -PRESS 9 9 INE1 1 INE2 6	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 21 2 9 1 4 13 1 5 13 10 11 3 10 11 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2 1 1 1 1 1 1 4	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT CONNECTOR POWER INPUT	J03 J03 J03 J07 J07 J07		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 3 ALL3B 4 4 R-REFEX 3 3 3 3BRAKE 1 1LIFT 8 8PRESS 9	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 20 3 9 21 2 9 1 4 13 1 5 13 10 13 3 10 13 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2 1 1 1 1 1 1 1 1 2 2 1 2	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A  CONN. SYNCHRONIZER A  CONN. SUERNOIDS CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT	J03 J03 J03 J07 J07 J07		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 ALL3B 4 R-REFEX 3 3 3 3 3 -BRAKE 1 1 -LIFT 8 8 -PRESS 9 INE1 1 INE2 6 6 RX-Q10 RX-Q11	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 21 2 9 1 4 13 1 5 13 10 11 3 10 13 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2 1 1 1 1 1 1 2 2 1 2 3 0 4 11 3 0 4 17	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN CTL, JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SCLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SCLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SCLENOIDS CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT CONNECTOR POWER INPUT POWER SWITCH  CONN. KEYS MATRIX	J03 J03 J03 J03 J07 J07 J07 P01 P01		
ALL 2A 5 5 ALL 2B 6 6 ALL 3A 3 ALL 3B 4 4 R-REFEX 3 3 3 3 -BRAKE 1 1 -LIFT 8 8 -PRESS 9 INE1 1 INE2 6 6 RX-Q10 RX-Q11 RX-Q12	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 21 2 9 1 4 13 1 5 13 10 11 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2 1 1 1 1 1 1 4 1 1 2 2 1 2 3 2 1 2 3 3 4 11 3 4 17 3 6 4 17	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A CONN. SOLENDIDS CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONN. KEYS MATRIX  CONN. KEYS MATRIX	J03 J03 J03 J03 J07 J07 J07 P01 P01		
ALL 2A 5 5 ALL 2B 6 6 ALL 3A 3 3 ALL 3B 4 4 R-REFEX 3 3 3 3	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 21 2 8 20 3 9 21 2 9 1 4 13 1 5 13 10 11 3 10 13 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2 1 1 1 1 1 4 1 1 4 1 1 2 2 1 2 30 4 11 30 4 17 30 4 15	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL, JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SOLENOIDS CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONN. KEYS MATRIX	J03 J03 J03 J03 J07 J07 J07 P01 P01		
ALL2A 5 5 ALL2B 6 6 ALL3A 3 ALL3B 4 4 R-REFEX 3 3 3 -BRAKE 1 1 -LIFT 8 8 -PRESS 9 9 INE1 1 1 INE2 6	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 20 3 9 21 2 9 1 4 13 1 5 13 10 13 3 10 13 3 10 7 1 25 1 1 10 7 5 26 1 2 11 1 1 11 1 4 11 2 2 1 2 3 0 4 11 3 0 4 15 3 0 4 10	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A  CONN. SYNCHRONIZER A  CONN. SQLENOIDS CONN. TAPE DECK CTL. JO7  CONN. SCLENDIDS CONN. TAPE DECK CTL. JO7  CONN. SCLENDIDS CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT CONN. KEYS MATRIX  CONN. KEYS MATRIX  CONN. KEYS MATRIX  CONN. KEYS MATRIX	J03 J03 J03 J03 J07 J07 J07 P01 P01		
ALL 2A 5 5 5	20 3 6 21 2 6 20 3 7 21 2 7 20 3 8 21 2 8 20 3 9 21 2 9 1 4 13 1 5 13 10 11 3 10 13 3 10 7 1 25 1 1 10 7 3 27 1 2 10 7 5 26 1 2 1 1 1 1 1 1 2 2 1 2	N N N N N N N N N N N N N N N N N N N	CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  CONN. CAPSTAN TACHO CONN. CAPSTAN CTL. JO3  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A  CONN. STADE DECK CTL. JO7  CONN. TAPE DECK CTL. JO7  CONNECTOR POWER INPUT CONNECTOR POWER INPUT CONNECTOR POWER INPUT POWER SWITCH	J03 J03 J03 J03 J07 J07 J07 P01 P01		

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IGNAL NAME	COLOR	M I		ELM PNT 6 1	<u>s</u>		TYPE N	DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL.	J06	REMARK	ELEMENT NR.
	1		11	3 6	_		Ň				
S-DIREN	5 5 		10 11	6 5 3 13	-		N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	J0 3		
S-MVCLK	4			6 14 3 2	_		N N	CONN. SPOOLING MOTOR CTL.	103 706		
S-MVDIR	3		10 11	6 13 3 5			N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	703 709		
s-on	6		10	6 6 3 15	-		N N	CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.	J06		
S-PRESS				6 2 3 1	-		N N	CONN. SPCOLING MOTOR CTL.	J06		
S-REFA	8		10	6 8	-		N	CONN. SPOOLING MOTOR CTL.	J06		
S-REFB	8  7		10	3 9  6 7	-		N	CONN. SPOOLING MOTOR CTL.	J06		
S_REW	7			3 11 6 4	-		N N				
	4		11	3 17	-		Ň				
S-SHUTL	3 3 		11	6 3 3 20	_		N N		J06		
IV-CLK1	1			3 5 1 3			N N	CONN. MOVE SENSOR CONN. TAPE DECK CTL. JO3	J03		
IV-CLK2	2		10 24	3 3 1 1	_		N N	CONN. MOVE SENSOR CONN. TAPE DECK CTL. JO3	J03		
11-R			11 11	7 2 7 3	-		N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR FILTER, LEFT	J07 J07		
	2		12 12	1 2 1 3			N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT	P01 P01 J01		
	2		12 15	3 1 1 1	_			CONN. SP. MOTOR FILTER, JO1			
11-S			11 11 12	7 4 7 5 1 4			N N N	CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR FILTER, LEFT CONN. SP. MOTOR CTL,	J07 J07 P01		
	9		12 12	1 5 3 2			N	CONN. SP. MOTOR CTL. CONN. SP. MOTOR LEFT	P01 J01		
 1-T	9		15 11	1 2 7 8	-		N	CONN. SP. MOTOR FILTER, JOI CONN. SP. MOTOR FILTER, LEFT	J07		
			11	7 0				CONN. SP. MOTOR FILTER, LEFT	J07		
			12	7 9			N N	CONN. SP. MOTOR CTL,	P01		
* WILLI S **********	TUDER AG	* **** 010.	12 12 12 15 	1 8 1 9 3 3 1 3 *******************************	A L ****	**** * T	**************************************		P01 P01 J01 	* 13:38 ***********************************	* PAGF 47
* WILLIS **********	6  ******** TUDER AG ******** 1.727.	* **** 010. ****	12 12 12 15 	1 8 1 9 3 3 1 3 *******************************	A L **** 807 ****	**** * T	N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/ * 88/	P01 P01 J01 	* 13:38 ***********************************	* PAGF 47
* WILLIS *********  * **********	6  ******** TUDER AG ******** 1.727.	* **** 010. ****	12 12 12 15 	1 8 1 9 3 3 1 3 *******************************	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/ *********************************	P01 P01 J01  ******* 06/09 ******** 03/21 ******	* 13:38 ********* - 01 ******	* PAGF 47 **********************
* WILLI S **********  * *********** SIGNAL NAME	6 ******** TUDER AG ******** 1.727. ********	* **** 010. ****	12 12 12 15 ********* S f ********* O * \$TI ********	1 8 1 9 3 3 1 3 *******************************	A L ***** 807 ****	**** * T	************  W I R E  ***********  APE RECORDER  **********************************	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  ***********************************	P01 P01 J01  ******************************	* 13:38 ********* - 01 ******	* PAGF 47 *********************
* WILLI S **********  ***********  SIGNAL NAME  M1-TACHO  M1-TSENS	6 ******** TUDER AG ******** 1.727. ********	* **** 010. ****	12 12 15 15 ********* S I ********* OO * STU ********** ASY GRP	1 8 1 9 3 3 1 3 *******************************	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT	P01 P01 J01 *********************************	* 13:38 ********* - 01 ******	* PAGF 47 *********************
* WILLI S **********  ***********  SIGNAL NAME  M1-TACHO  M1-TSENS	5  ********** TUDER AG ********** 1-727; ********** COLOR 1 1 4 4	* **** 010. ****	12 12 12 15 ****************************	1 8 1 9 3 3 1 3 3 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, SP. MOTOR CTL, CONN. SP. MOTOR CTL,	P01 P01 J01 *********************************	* 13:38 ********* - 01 ******	* PAGF 47 **********************
# HILLI S ** ** ********* ** ** ** ** ** ** ** *	6 ******** TUDER AG ******** 1.727. ********	* **** 010. ****	12 12 12 15 ********* 00 * STI *********** 10 11 17 	1 8 1 9 3 3 3 1 3 3 3 1 3 3 3 1 3 3 3 3 1 3 3 3 3 1 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. TAPE DECK CTL.  CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, JO1	P01 P01 J01 	* 13:38 ********* - 01 ******	* PAGF 47 *********************
* WILLI S ***********  * SIGNAL NAME M1-TACHO M1-TSENS M2-R	5  ********* TUDER AG ********** 1-727. ********** COLOR 1 1 4 4	* **** 010. ****	12 12 12 15 15 *************************	1 8 1 9 3 3 1 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  ***********************************	P01 P01 J01 *********************************	* 13:38 ********* - 01 ******	* PAGF 47 *********************
# HILLI S  *********** SIGNAL NAME M1-TACHO M1-TSENS M2-R	5 	* **** 010. ****	12 12 12 15 15 16 10 11 11 17 11 11 11 12 12 12 16 10 11	1 8 1 9 3 3 1 3 3 3 1 3 3 3 1 3 3 3 1 3 3 3 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR GTL, CONN. SP. MOTOR FILTER, IGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, SIGHT CONN. SP. MOTOR FILTER, RIGHT	P01 P01 J01 	* 13:38 ********* - 01 ******	* PAGF 47 *********************
# HILL I S  ***********  * SIGNAL NAME M1-TACHO  M1-TSENS  M2-R	********  ********  ********  1-727  *********  COLOR  1 1 4 4 2 2 0 0 0 9	* **** 010. ****	12 12 12 15 ****************************	1 8 1 9 3 3 1 3 3 8 1 1 3 8 1 1 3 8 1 1 3 8 1 1 3 8 1 1 3 8 1 1 3 8 1 1 1 1	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  LIST ** 887  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL,	P01 P01 J01 	* 13:38 ********* - 01 ******	* PAGF 47 *******************
* HILLI S  * * * * * * * * * * * * * * * * * *	********  ********  ********  ********	* **** 010. ****	12 12 12 15 ********  ********  ********  ASY GRP  10 11 17	1 8 1 9 3 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T ** 88/  *******************************	P01 P01 J01 *********************************	* 13:38 ********* - 01 ******	* PAGF 47 *******************
# HILLI S  ************ SIGNAL NAME M1-TACHO M1-TSENS M2-R M2-R M2-R M2-R M2-R M2-R	********  ********  ********  1-727  *********  COLOR  1 1 4 4 2 2 0 0 0 9	* **** 010. ****	12 12 12 15 ****************************	1 8 1 9 3 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHOL LEFT CONN. SP. MOTOR TACHOL LEFT CONN. SP. MOTOR TACHOL LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT	P01	* 13:38 ********* - 01 ******	* PAGF 47 *********************
HILLIS  SIGNAL NAME  H1-TACHO  H1-TSENS  H2-REFAN  H2-REFAN	********  ********  ********  1-727  *********  COLOR  1 1 4 4 2 2 0 0 0 9	* **** 010. ****	12 12 12 15 15 16 10 11 11 17 11 11 11 12 12 12 16 10 11 11 11 12 12 12 12 11 11 11 11 11 11	1 8 1 9 3 3 3 1 3 3 3 3 1 3 3 3 3 1 3 3 3 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  LIST *887  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR FILTER, RIGHT	P01 P01 J01 	* 13:38 ********* - 01 ******	* PAGF 47 *********************
# HILLI S ####################################	********  ********  ********  ********	* **** 010. ****	12 12 12 15 ****************************	1 8 1 9 3 3 3 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, JO1	P01 P01 J01 	* 13:38 ********* - 01 ******	* PAGF 47 ***********************
# # # # # # # # # # # # # # # # # # #	********  ********  ********  ********	* **** 010. ****	12 12 12 12 15 15 16 10 11 11 11 11 11 12 12 12 16 10 11 11 11 12 12 12 12 16 11 11 11 11 11 11 11 11 11 11 11 11	1 8 1 9 3 3 3 1 3 3 3 3 1 3 3 3 3 3 3 3 3 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1	P01 P01 J01 *********************************	* 13:38 ********* - 01 ******	* PAGF 47 ***********************
# WILLI S #********* \$1GNAL NAME #1-TACHO #1-TSENS #2-R #2-REFAN #2-R #2-TACHO #2-TSENS	********  ********  ********  ********	* **** 010. ****	12 12 12 12 15 ********  ********  ASY GRP  10 11 17 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 11 11 11 12 12 12 16 10 11 11 11 11 11 11 12 12 12 16 10 11 11 11 11 11 11 11 11 12 12 12 12 16 10 11 11 11 11 11 11 11 11 11 11 11 11	1 8 1 9 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 3 1 3 1 3 1 3 1 4 1 3 1 4 1 3 3 1 4 1 3 3 1 4 1 3 3 7 4 1 3 3 2 4 4 2 4 1 3 3 7 7 4 4 1 3 3 2 4 4 4 1 3 3 7 7 4 4 1 3 3 2 4 4 4 1 3 3 7 7 4 4 1 3 3 2 4 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 4 4 1 3 3 7 7 7 4 4 1 3 3 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  ***********************************	P01	* 13:38 ********* - 01 ******	* PAGF 47 ***********************
# HILLI S ####################################	********  ********  ********  ********	* **** 010. ****	12 12 12 12 15 *************************	1 8 1 9 3 3 3 1 3 3 3 4 5 5 4 1 3 3 8 1 8 2 2 1 2 2 2 1 1 1 1 1 1 1 1 1 1 1	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  ***********************************	P01 P01 J01 	* 13:38 ********* - 01 ******	* PAGF 47 *********************
# HILLI S # ##################################	********  ********  1-727  *********  1 1	* **** 010. ****	12 12 12 12 15 *********  \$ 1 1 *********  ASY GRP  10 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 11 11 11 12 12 12 12 12 12 12 12 12 12	1 8 1 9 3 3 3 1 3 3 4 4 1 1 3 4 4 4 1 1 3 3 7 7 4 4 4 1 1 1 2 1 1 1 4 4 1 1 1 1 1 4 4 1 1 1 1	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL. CONN. SP. MOTOR CTL. CONN. SP. MOTOR TILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR CTL, CONN. SP. MOT	P01	* 13:38 ********* - 01 ******	* PAGF 47 *********************
# HILLI S #**********  **********  **********  ****	********  ********  ********  ********	* **** 010. ****	12 12 12 12 15 ********  S 1 1 *******  ASY GRP  10 11 11 11 12 12 12 16 10 11 11 11 11 12 12 12 12 16 10 11 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 11 11 11 12 12 12 12 12 12 13 14 15 16 17 18 10 20 10 20 10 20 10 20 20	1 8 1 9 3 3 3 1 3 3 3 4 3 4 4 2 1 1 2 4 1 1 4 4 2 5 1 2 2 1 1 2 1 1 4 4 2 5 1 2 2 1 1 4 4 2 5 1 2 2 1 1 4 4 2 5 1 2 2 1 1 4 4 2 5 1 2 5 1 2	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR CTL, CONN. SP. MOTOR	P01	* 13:38 ********* - 01 ******	* PAGF 47 ***********************
# HILLI S #**********  **********  **********  ****	********  ********  1-727  *********  1 1	* **** 010. ****	12 12 12 12 13 15 *********  S 1 1 ********  10 11 17 11 11 12 12 12 12 16 10 11 11 11 11 12 12 12 12 16 10 11 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 11 11 11 12 12 12 12 12 10 10 10 10 20 10 20 10	1 8 1 9 3 3 3 1 3 3 3 4 5 5 4 1 3 3 8 1 8 2 2 1 2 2 2 1 1 1 1 1 4 2 5 5 5 4 3 1 3 3 6 12 3 7 7 4 4 4 1 1 1 4 2 2 5 5	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  L I S T * 88/  DESCRIPTION OF ELEMENT  CONN. SPOOLING MOTOR CTL. CONN. SP. MOTOR TACHO, LEFT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, JO5  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR CTL, CONN. TAPE DECK CTL.  CONN. CAPSTAN CTL. CONN. CAPSTAN CTL.	P01	* 13:38 ********* - 01 ******	* PAGF 47 *********************
# HILLI S  ***********  **********  *********  ****	6	* **** 010. ****	12 12 12 12 15  ***********  **********  ASY GRP  10 11 17 11 11 12 12 12 16 10 11 11 12 12 12 16 11 11 12 12 12 16 11 11 12 12 12 16 10 11 11 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 16 10 11 11 11 12 12 12 12 12 16 10 10 10 20 10 20 10	1 8 1 9 3 3 3 1 3 3 3 3 1 3 3 3 3 1 3 3 3 3	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  *** 88/**  *** 88/**  *** 88/**  *** BESCRIPTION OF ELEMENT  *** CONN. SPOOLING MOTOR CTL. CONN. SPOOLING MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CON.	P01	* 13:38 ********* - 01 ******	* PAGF 47 *******************
* HILLI S ** ** ** ** ** ** ** ** ** ** ** ** **	********  ********  ********  ********	* **** 010. ****	12 12 12 12 15 *************************	1 8 1 9 3 3 3 1 3 3 3 4 1 3 3 8 4 4 2 2 1 1 2 2 4 4 1 1 1 4 4 2 5 1 1 2 1 1 1 4 4 2 5 1 1 2 2 2 3 3 4 1 1 3 4 1 1	A L ***** 807 ****	**** * T	N N N N N N N N N N N N N N N N N N N	CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR LEFT CONN. SP. MOTOR FILTER, JO1  *** 88/**  *** 88/**  *** 88/**  *** BESCRIPTION OF ELEMENT  *** CONN. SPOOLING MOTOR CTL. CONN. SPOOLING MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR CTL, CONN. SP. MOTOR RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CONN. SP. MOTOR FILTER, RIGHT CONN. SP. MOTOR FILTER, JO1  CON.	P01	* 13:38 ********* - 01 ******	* PAGF 47 *******************

	COLOR	MI	ASY GRP EL	M PNT S	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
43-SYNC	7		10 2 20 1			N N	CONN. CAPSTAN CTL. CONN. TAPE DECK CTL.	J02 J01		
43 – T	0		20 4	4 4		N N	CONN. CAPSTAN MOTOR	J04		
13-TACHO	6		10 2	6		N	CONN. CAPSTAN CTL, JO4	J02		
13-9600	2		20 1 10 2	2		N N	CONN. TAPE DECK CTL.  CONN. CAPSTAN CTL.	J01 J02		
IR-CMCLK	2			12  11		В	CONN. TAPE DECK CTL.  CONN. SYNCHRONIZER	J01		
IR-MVCLK	1  5		10 13	<u>1</u> 7		N  B	CONN. SYNCHRONIZER A CONN. SYNCHRONIZER	J13		
R-MVDIR	5		10 13	5 		N 	CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER	J13		
	6		10 13			Ň	CONN. SYNCHRONIZER A	J13		
R-SYENB	8		10 14			B N	CONN. SYNCHRONIZER CONN. SYNCHRONIZER B	J14		
RIMW-1	1		4 1 5 1	5 1		L Y	VOLTAGE SELECTOR PRIMARY 1	P01		
R IMW-3	3 3		4 1 5 1	2 3 		L Y 	VOLTAGE SELECTOR PRIMARY 1	P01		
RIMW-4	4-4 4		4 1 5 1	4A 4		L Y	VOLTAGE SELECTOR PRIMARY 1	P01		
RIMW-5	5 5		4 1 5 2	6 5		L Y	VOLTAGE SELECTOR PRIMARY 2	P02		
RIMW-6	6-4 6		4 l 5 2	4B 6		L Y	VOLTAGE SELECTOR PRIMARY 2	P02		
RIMW-7	7		4 1 5 2	3 7		L Y	VOLTAGE SELECTOR PRIMARY 2	P02		
-RECLVA	4		44 1 46 1	4 1		N L	CONN. M/S ADJUSTMENT CONN. M/S INPUT AMPL. J01			
-RECLVB	5 5		44 1 46 1	5 2		N L	CONN. M/S ADJUSTMENT CONN. M/S INPUT AMPL. JO1			
-REPLVA	1		45 2 46 1	2 3		Υ	CONN. M/S ADJUSTMENT			
-REPLVB	3		45 2	1		<u>-</u> У	CONN. M/S INPUT AMPL. JO1			
-SHUTL1	1		46 1 11 6	<del>4</del>		N	CONN. M/S INPUT AMPL. JO1 CONN. SHUTTLE CTL.	J06		
WILLI ST	*****	*****	**************************************	******* N A ********	**** L ****	**************************************	**************************************	******* /03/21 -		
**************************************	1.727.0 ********	****	*********** 0 * STUDE *********	******** R A 807 *********	****	*******	**************************************	******* /03/21 - *******	********** 01	*****
;	1.727.0 ********	****	********* 0 * STUDE *******	******** R A 807 ********* M PNT S	****	**************************************	**************************************	******** /03/21 - *******  J06	**********	******
######################################	1.727.0 ************************************	****	********** 0 * STUDE  *********  ASY GRP EL  11 6 30 7	******** R A 807 ******** M PNT S  2 2	****	TAPE RECORDER  ********  TYPE  N	R * 88 *********************************	******* /03/21 - *******	**********	******
**************************************	1.727.0 ************************************	****	*********  0 * STUDE  ********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2	********* R A 807 *******  M PNT S	****	TYPE  N L	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POIMETER  CONN. SHUTTLE CTL. SHUTTLE POIMETER	******** /03/21 - *******  J06	**********	******
######################################	COLOR 2 2 2 3 3 3	****	**********  O * STUDE  **********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  11 3 10 4	*********  R A 807  ********  M PNT S 2 2 4 3 4 3 2 8 1	****	**************************************	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.	********* /03/21 - *******  J06 J06 J02	**********	******
***********  *********  IGNAL NAME  -SHUTL2  -SHUTL3  -VRSPD  CVDATA	1.727-0  ********  COLOR  2  2  3  3  8 8 1	****	**********  O * STUDE  *********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4 39 1 41 4	**************************************	****	TYPE N L N L N L N L N L N L N L N L N L N	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.	********* /03/21 - *******  J06 J06	**********	******
***********  IGNAL NAME  -SHUTL2  -SHUTL3  -VRSPD  CVDATA  ECHH-01	1.727-0  COLOR 2 2 2 3 3 8 8 1	***** MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  10 4  39 1 41 4  39 1 42 4	**********  *********  *********  ******	****	TYPE N L N L N L N L N L N L N L N L N L N	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD	******** /03/21 - *******  J06 J06 J02	**********	******
************  IGNAL NAME -SHUTL2 -SHUTL3 -VRSPD -VRSPD -CVDATA -ECHH-01 -ECHH-02	**************************************	***** MI	**********  O * STUDE  **********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  10 4  39 1 41 4  39 1 42 4	**********  *********  M PNI	****	TYPE  TYPE  N L  N L  N L  N B N B N B B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD	******** /03/21 - *******  J06 J06 J02	**********	******
***********  IGNAL NAME  -SHUTL2  -SHUTL3  -VRSPD  CVDATA  ECHH-01  ECHH-02	**************************************	***** MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  10 4  39 1 41 4  39 1 41 4  39 1 41 4	**********  ** A 807	****	TYPE N L N L N L N B N B N B N B N B N B N B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CUNNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD	******** /03/21 - *******  J06 J06 J02	**********	******
***********  IGNAL NAME  -SHUTL2  -SHUTL3  -VRSPD  CVDATA	**************************************	MI	**********  O * STUDE  **********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  10 4  39 1 41 4  39 1 41 4  39 1 41 4  39 1 41 4	**************************************	****	TYPE  N L  N L  N B N B N B N B N B N B N B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIG SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD	******** /03/21 - *******  J06 J06 J02	**********	******
***********  IGNAL NAMESHUTL2SHUTL3VRSPD  CVDATA  ECHH-01	**************************************	MI	**********  O * STUDE  **********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4  39 1 41 4  39 1 42 4  39 1 41 4  39 1 41 5  39 1 41 5	**************************************	****	TYPE  N L  N L  N B N B N B N B N B N B N B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIG SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD	******** /03/21 - *******  J06 J06 J02	**********	******
*************  IGNAL NAME -SHUTL2 -SHUTL3 -VRSPD  CVDATA ECHH-01 ECHL-02 ECHL-02 EPHH-01 EPHH-01	**************************************	MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  13 10 4  39 1 41 4  39 1 42 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5	**************************************	****	TYPE	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIG SPEED POTM.  SERIAL CTL. CUNNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS	******** /03/21 - *******  J06 J06 J02	**********	******
***********  IGNAL NAMESHUTL2SHUTL3VRSPD  CVDATA  ECHH-01  ECHH-02  ECHL-01  ECHL-01  EPHH-02  EPHH-01	**************************************	MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 31 1 6 30 4  39 1 41 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS	******** /03/21 - *******  J06 J06 J02	**********	******
**************************************	**************************************	MI	**********  O * STUDE  **********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE  N L  N L  N B N B N B N B N B N B N B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIG SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS	******** /03/21 - *******  J06 J06 J02	**********	******
**************************************	**************************************	MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4  39 1 41 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO	******** /03/21 - *******  J06 J06 J02	**************************************	******
************  IGNAL NAMESHUTL2SHUTL3VRSPD  CVDATA  ECHH-01  ECHH-02  ECHL-01  EPHH-02  EPHH-01  EPHL-01  EPHL-01  EPHC-01  EPHC-01  EPHC-01	**************************************	MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4  39 1 41 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE  N L  N L  N B N B N B N B N B N B N B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO	******** /03/21 - *******  J06 J06 J02	**************************************	******
************  IGNAL NAMESHUTL2SHUTL3VRSPD  GVDATA  ECHH-01  ECHH-02  ECHL-01  ECHL-01  EPHH-02  EPHH-02  EPHL-01  EPHL-02	**************************************	MI	***********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4  39 1 41 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIG SPEED POTM.  SERIAL CTL. CUNNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  POWER SWITCH MAINS FILTER, INPUT	******** /03/21 - *******  J06 J06 J02	**************************************	******
*************  IGNAL NAME -SHUTL2 -SHUTL3 -VRSPD  GVDATA  ECHH-01 ECHH-02 ECHL-02 EPHH-01 EPHH-02 EPHH-01 EPHH-02	**************************************	MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 31 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE  N L  N L  B N B N B N B N B N J J J J J	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. VARI SPEED CTL. VARIO SPEED POTM.  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. HEAD BLOCK, REPRO  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  POWER SWITCH MAINS FILTER. INPUT	**************************************	**************************************	******
************  IGNAL NAME -SHUTL2 -SHUTL3 -VRSPD -CVDATA ECHH-01 ECHH-02 ECHL-01 ECHL-02 EPHH-01	**************************************	MI	**********  ASY GRP EL  11 6 30 7  11 6 30 7  20 2 35 7  1 3 10 4  39 1 41 4  39 1 41 4  39 1 41 4  39 1 41 5  39 1 41 5  39 1 41 5  39 1 41 5	**************************************	****	TYPE  N L  N L  N B N B N B N B N B N B N B	DESCRIPTION OF ELEMENT  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SHUTTLE CTL. SHUTTLE POTMETER  CONN. SERIAL CTL.  CONN. SERIAL CTL.  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, RECORD  CONN. AUDIO ELECTRONICS CONN. HEAD BLOCK, REPRO  POWER SWITCH MAINS FILTER, INPUT	******** /03/21 - *******  J06 J06 J02	**************************************	*****

SIGNAL NAME	COLOR	мі	ASY GRE	) EL#	PNT	s	LV	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
-TGOFF	1		44	1	11	-	==	N	CONN. M/S ADJUSTMENT			
	1  2		46 44		11	-		L N	TEST GEN. FREQUENCY SWITCH CONN. M/S ADJUSTMENT			
	2		46 46	3	7 12			Ľ L	TEST GEN. FREQUENCY SWITCH TEST GEN. FREQUENCY SWITCH			
			46 46	3	14			L L	TEST GEN. FREQUENCY SWITCH TEST GEN. FREQUENCY SWITCH			
			46 46	3	15 16			L L	TEST GEN. FREQUENCY SWITCH TEST GEN. FREQUENCY SWITCH			
-TG1K	8		44 46	1 3		-		N L	CONN. M/S ADJUSTMENT TEST GEN. FREQUENCY SWITCH			
-TG100B	7			1		-		N	CONN. M/S ADJUSTMENT			
	2			1	2			N L	CONN. M/S OUTPUT APML. CONN. M/S INPUT AMPL. JOI			
	2  9			2 1		-		L	TEST GEN. LEVEL SWITCH CONN. M/S ADJUSTMENT			
	9 		46	<u>3</u>		_		Ĺ	TEST GEN. FREQUENCY SWITCH			
-TG125	7 7		44 46	3	3			N L	CONN. M/S ADJUSTMENT TEST GEN. FREQUENCY SWITCH			
-TG16K	0		44 46	1 3	10	_		N L	CONN. M/S ADJUSTMENT TEST GEN. FREQUENCY SWITCH			
-TG20DB	8		44	1	18	-		N	CONN. M/S ADJUSTMENT			
	1		44 45	1_				N L	CONN. M/S OUTPUT APML. CONN. M/S INPUT AMPL. JOI TEST GEN. LEVEL SWITCH			
	1 		46 	2 1		-		N	CONN. M/S ADJUSTMENT			
	6		46	3	2	-		L	TEST GEN. FREQUENCY SWITCH			
F-LINE1	1 2-1 2		3 4	2 1 1	1 7 2			J L	MAINS FILTER, OUTPUT VOLTAGE SELECTOR PRIMARY 1	P01		
F-LINE2	6		3	<u>-</u> -	2	-		<u>'</u>	MAINS FILTER, OUTPUT			
	6-8 8		<b>4</b> 5	1 2	1 8			L Y	VOLTAGE SELECTOR PRIMARY 2	P02		
M-DO	8		10 30	9 3	8	-		N D	CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10	J09		
			30	<del>-</del>		_		N	CONN. KEYS MATRIX			
M-D1	7 7		10 30 30	9 3 4	8			N D N	CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10	109		
						-			CONN. KEYS MATRIX	J09		
M=D2	6		10	Q	6			N				
**************************************	UDER AG ******* 1.727.	**** 010	S ******* .00 * S	4  ***** I G *****	7 7  ******* N A	4 L *****	*****	W I R E ***********************************	**********	********* 88/06/09 ******** 88/03/21	* 13:38 * ********* - 01	PAGF 51
**************************************	******** UDER AC ******* 1.727. *******	010	30 30 30 	3 4  ***** I G ***** TUDER ****	7 7  ******* 8 A 8 ******	4 L ***** 807 4 ****	**** * T/ ***	D N	CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  L I S T *  ********************************	******** 88/06/09 ********* 88/03/21 ********	* 13:38 * ********* - 01	PAGF 51
* WILLI ST ***************	******** UDER AC ******* 1.727. *******	010	30 30 	3 4  ***** I G ***** TUDER ****	7 7  ******* ** A 8 *******	4 L ***** 807 4 ****	**** * T/ ***	D N	CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  L I S T *  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10	******** 88/06/09 ******** 88/03/21 -	* 13:38 * ********* - 01 ******	PAGF 51 **********************
**************************************	******** UDER AC 1.727. ******* COLOR	010	30 30 30 30 30 30 4 4 5 8 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	3 4 ****** I G ***** TUDER ***** 9 3 4	7 7 7 N A ***********************************	4 L ***** 807 4 ****	**** * T/ ***	D N	CONN. KEYS MATRIX  L I S T  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. KEYS MATRIX  CONN. COMMAND PANEL	******** 88/06/09 ********* 88/03/21 ********	* 13:38 * ********* - 01 ******	PAGF 51 **********************
**************************************	******** UDER AC 1.727. ******* COLOR	010	30 30 30 	3 4 ****** I G ****** P ELM 9 3 4	7 7 7 ******* A 8 *******	4 L ***** 807 4 ****	**** * T/ ***	D N	CONN. KEYS MATRIX  L I S T *  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. COMMAND PANEL CONN. CCMMAND PANEL CONN. CCMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX	********* 88/06/09 ********** 88/03/21 *********	* 13:38 * ********* - 01 ******	PAGF 51 *********************
**************************************	******** UDER AC 1.727. ******* COLOR	010	30 30 30 30 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ************  TYPE N D N N N D N D N D	CONN. KEYS MATRIX  LIST  LIST  ESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TOMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX	********* 88/06/09 *********** *88/03/21 ********** J09	* 13:38 * ********* - 01 ******	PAGF 51 **********************
**************************************	******** UDER AC ******* 1.727. ******* COLOR 5 4 3 3	010	*********  5  ********  00 * S  ********  ASY GRI  30  30  10 30 30 30 30 30 30	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N	CONN. KEYS MATRIX  LIST  BESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX	********** 88/06/09 88/03/21 - ********** J09	* 13:38 * ********* - 01 ******	PAGF 51 **********************
**************************************	********  *******  1.727  ********  COLOR  5 5 4 4	010	30 30 30 30 4 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ************  TYPE N D N N N D N D N D	CONN. KEYS MATRIX  L I S T  **********************************	********* 88/06/09 *********** *88/03/21 ********** J09	* 13:38 * ********* - 01 ******	PAGF 51 **********************
WILL I ST  *************  ************  *IGNAL NAME  M-D3  6M-D4  5M-D5  6M-D6	********* UDER AC ******** 1.727.*******  COLOR 4 4 3 3 2 2	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ************  TYPE N D N N N D N N N N N N N N N N N N N	CONN. KEYS MATRIX  LIST  LIST  ESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. COMMAND PANEL CONN. KEYS MATRIX	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 **********************
######################################	********* UDER AG ******** 1.727. ******* 5 5 4 4 2 2	010	********** 00 * \$5'********  ASY GRI 30 30 30 10 30 30 10 30 30 30 30 30 30 30 30 30 30 30 30 30 30 30	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *********************************	CONN. KEYS MATRIX  L I S T *  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. CCMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
***********  WILLI ST  ***********  ***********  **********	********* UDER AC ******** 1.727.*******  COLOR 4 4 3 3 2 2	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N	CONN. KEYS MATRIX  LIST  BESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL. CONNECTOR CONN. SERIAL CTL.	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 **********************
######################################	********* UDER AC ******** 1.727.*******  COLOR 5 3 3 2 1 1 2 2 5	010	*********  *******  ******  ASY GRI  30  30  30  10 30 30 10	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER *************  TYPE N D N N N D N N N D N N N D N N N D N N N D N N D N N D N N D N N D N N D N N D D N D D N D D N D D N D D N D D D N D D D N D D D N D D D N D D D N D	CONN. KEYS MATRIX  L I S T  **********************************	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
######################################	******** UDER AG ******** 1.727. ******* 5 5 4 4 1.727. 1 1 1 2 2 2 2	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4 4 11 4 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E APE RECORDER N D N N D N N D N N D N N D N N D N N D N N D D N D N D D N D N D D N N D D N D N D D N D N D D N D N D D N D N D D N D N D D N D N D D N D N D D N D D N D D N D D N D D N D D N D D N D D N D D N D D N D D N D D N D D N D D D N D D D N D D D N D D D N D D D N D D D N D D D N D D D D N D D D D N D	CONN. KEYS MATRIX  L I S T *  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
######################################	******** UDER AG ******** 1.727.*******  COLOR 3 3 1 1 2 2 5 5 0 0	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ************  TYPE N D N N N D N N N D N N N D N N N D D N N D D N N D D N N D D N N D D N N D D N N D D N D D N D D N D D D N D	CONN. KEYS MATRIX  LIST  LIST  BESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A	********** 88/06/09 ***********  J09  J09  J09  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 *********************
######################################	********  *******  *******  *******  ****	010	********  ******  ******  ASY GRI  30  30  30  10  10  10  10  10  10	3 4 4 *********************************	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ***********  TYPE N D N N N D N N N D N N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N N D D D N D D D N D	CONN. KEYS MATRIX  LIST  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A  CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
######################################	******** UDER AG ******** 1.727.*******  COLOR 3 3 1 1 2 2 5 5 0 0	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4 4	7 7 7 7 7 7 7 8 8 A 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ************  TYPE N D N N N D N N N D N N N D N N N D D N N D D N N D D N N D D N N D D N N D D N N D D N D D N D D N D D D N D	CONN. KEYS MATRIX  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. TAPE DECK CTL. J10 CONN. COMMAND PANEL CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A	********** 88/06/09 ***********  J09  J09  J09  J09  J09	* 13:38 * ********* - 01 ******	PAGF 51 **********************
######################################	******** UDER AC ********  COLOR 4 4 3 3 2 2 1 1 7 7 7 7	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4 4 11 4 5 5 11 13	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ************  TYPE  N D N N N D N N D N N D N N D D N N D D N N D D N D D N D	CONN. KEYS MATRIX  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. TAPE DECK CTL. J10 CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 **********************
######################################	********  *******  *******  *******  ****	010	30 30	3 4 4 9 3 4 4 9 3 4 4 9 3 4 4 11 1 13 1 1 1 1 1 1 1 1 1 1 1 1 1	7 7 7 7 7 7 8 8 A 8 8 A 8 8 A 8 8 8 A 8 8 8 8	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER *************  TYPE N D N N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N D N N D D N N D D N D D N D D N D D N D D N D D N D D N D D N D D D N D	CONN. KEYS MATRIX  L I S T  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. TAPE DECK CTL. J10 CONN. CCMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
######################################	******** UDER AG ******** 1.727. *******  COLOR 5 5 4 4 3 3 1 1 1 2 2 5 0 0 0 0 7 7 7 7 6	010	********  ******  ASY GRI  300  300  300  300  300  300  300  10  300  300  10  1	3 4 4	7 7 7 7 7 7 8 8 8 A 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	4 L ***** 807 4 ****	**** * T/ ***	D N N N N N N N N N N N N N N N N N N N	CONN. KEYS MATRIX  LIST  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CONN. COMMAND PANEL CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER A  CONN. SYNCHRONIZER A	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
*********** * WILL I ST ************* *********************	******** UDER AG ******** 1.727. *******  COLOR 5 5 4 4 3 3 1 1 1 2 2 5 0 0 0 0 7 7 7 7 6	010	30 30 30 30 30 30 30 30 30 30 30 30 30 3	3 4 4	7 7 7 7 7 8 8 4 8 8 8 8 8 8 8 8 8 8 8 8	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E *** W I R E *** PPE RECORDER ***********  TYPE N D N N N D N N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N N D N D N N D D N N D D N N D D N N D D N N D D N N D D N N D D N N D D N N D D N D D N D D N D	CONN. KEYS MATRIX  LIST  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER A  PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A  PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A  PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A  PARALLEL REMOTE CONNECTOR CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A  PARALLEL REMOTE CONNECTOR	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 ********************
**************************************	******** UDER AG ******** 1.727. *******  COLOR 5 5 4 4 3 3 1 1 1 2 2 5 0 0 0 0 7 7 7 7 6	010	********  ******  ******  ASY GRI  30  30  30  30  30  30  30  10  30  30	3 4 4 11 13 4 5 11 13 5 5 11	7 7 7 7 7 8 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E S N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N B B N N N N N B B N	CONN. KEYS MATRIX  L I S T  BESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A  CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 *********************
######################################	******** UDER AC ******** 1.727.*******  COLOR 4 4 1 1 2 2 1 1 6 6 7 7 7 7 7 7 9 9 9	010	********  ******  ******  ASY GRI  30  30  30  30  30  30  30  10  30  30	3 4 4 9 3 4 4 9 3 4 4 9 3 4 4 11 13 13 11 13 13 14 5 5 11 13 4 5 5 11 13 4 5 5 11 13 13 4 6 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 5 5 11 13 13 14 15 15 11 13 13 14 15 15 11 13 13 14 15 15 11 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	7 7 7 7 7 7 8 8 4 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8 1 8	4 L ***** 807 4 ****	**** * T/ ***	D N N I R E ***  W I R E ***  W I R E ***  TYPE  N D N N D N N D N N D D D N N D D D N N D D D N N D D D N D D D N D	CONN. KEYS MATRIX  L I S T **  DESCRIPTION OF ELEMENT  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  CONN. COMMAND PANEL CONN. TAPE DECK CTL. J10 CONN. KEYS MATRIX  SERIAL CTL. CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SERIAL CTL.  PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER	**************************************	* 13:38 * ********* - 01 ******	PAGF 51 ********************
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*			00 * ST					APE RECORDER		3/03/21 -		*
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SIGNAL NAME	COLOR	H I	ASY GRP	ELF	PNT	s -	_ V	TYPE	DESCRIPTION OF ELEMENT		REMARK	ELEMENT NR.
SR-REW	1		1	4	20			В	PARALLEL REMOTE CONNECTOR			
	1		1 10	11	20 11			B	CONN. SYNCHRONIZER CONN. PARALLEL REMOTE A	J11		
	ī				11			N	CONN. SYNCHRONIZER A	J13		
SR-STOP	2		1	4	23	-		В	PARALLEL REMOTE CONNECTOR			
	2		1	5	23			В	CONN. SYNCHRONIZER			
	2 2			11				N N	CONN. PARALLEL REMOTE A CONN. SYNCHRONIZER A	J11 J13		
SR-VRSPD			1	4	 5	-		0				
31-413-0	4		1	5	5			8	PARALLEL REMOTE CONNECTOR CONN. SYNCHRONIZER			
	4			11				N	CONN. PARALLEL REMOTE A	J11		
	4		10	13	14	_		N	CONN. SYNCHRONIZER A	J13		
SR-ZLOC	6		1	4	14			В	PARALLEL REMOTE CONNECTOR			
	6		10	11	16	_		N	CONN. PARALLEL REMOTE A	J11		
SRPHH-01	9		39	1	5			В	CONN. AUDIO ELECTRONICS			
	9		43	1		_		N	CONN. HEAD BLOCK, SEC REPRO			
SRPHH-02	9		39		18			В	CONN. AUDIO ELECTRONICS			
	9		43	1	3	_		N	CONN. HEAD BLOCK.SEC REPRO			
SRPHL-01	6		39	1	4			В	CONN. AUDIO ELECTRONICS			
	6		43	1	5	_		N	CONN. HEAD BLOCK, SEC REPRO			
SRPHL-02	6		39		17			В	CONN. AUDIO ELECTRONICS			
	6		43	1	1	_		N	CONN. HEAD BLOCK.SEC REPRO			
SRPSC-01	S		39	1	6			В	CONN. AUDIO ELECTRONICS			
	S		43	1	7			N	CONN. HEAD BLOCK, SEC REPRO			
SRPSC-02	S		39	1	19	_		В	CONN. AUDIO ELECTRONICS			
	S		43	1	4	_		N	CONN. HEAD BLOCK.SEC REPRO			
TACHO-3A	1		20	3	1	_		N	CONN. CAPSTAN TACHO	J03		
	1		21	2	1	_		N	CONN. CAPSTAN CTL, JO3			
TACHO-3B	9		20	3	2	_		N	CONN. CAPSTAN TACHO	703		
	9		21	2	2			N	CUNN. CAPSTAN CTL. JO3			
TRS-A	3		10	5	2	-		N	CONN. TAPE TRANSPARENT SENSCE	3 J05		
	3		39	1	13			В	CONN. AUDIO ELECTRONICS			
TRS-C	4		10	5	4	-		N	CONN. TAPE TRANSPARENT SENSOR	305		
	4		39	1	24			В	CONN. AUDIO ELECTRONICS			
TRS-E	5		10	5		-		N	CONN. TAPE TRANSPARENT SENSOR	305		
	5		39	1	25			В	CONN. AUDIO ELECTRONICS			
TRS-K	2		10	5	1	-		N	CONN. TAPE TRANSPARENT SENSOR	305		
* **	2		39		12			В	CONN. AUDIO ELECTRONICS			
TTA-FORW	6		11	1		-		N	CONN. TAPE TENS. ADJUSTMENT	J01		
1 01111	6		14	î	8			N	CONN. SP. MOTOR CTL. JOI	301		
						-						

*********	TUDER AG		*****	I (	, ***	N A	***	****	****	 ****	₹ E	L ****	I S	****	****	****	****	***	88/0	6/09 ****	***	± + +	:38 ****	***	P ***4	A G	****	
* *********	1.727.	010.	00 * 5	TUDI	ER	A 8	C7	* 1	APE R	RECC	ORDER							*	88/0	3/21	- 0	1						
SIGNAL NAME	COLOR	ΜI	ASY GF	P E	_M	PNT	s	LV	TYPE	=			DESCE	IPTIO	N OF	ELEM	ENT				R	EMA	RK		ELE	MFN	TNF	₹.
TTA-LIBR	3		11			3 4	-		N N					TAPE SP.						<b>J</b> 0:	1							
TTA-PLAY	4		11		l l	4 10	_		N N					TAPE SP.						JO	1			-				
TTA-REW	5		11		l l	5 6	-		N N					TAPE SP. 1						J0 :	1			-				
TTA-SHT1	7 7		11		ı l	7 1	-		N N					TAPE SP.						J0 :	1			-				
TTA-SHT2	8		11		l L	8 2	-		N N				CONN.	TAPE SP.	HOTOR	CTL				J0:	1			-				
TTA-SHT3	9		11		ı L	9	-		N N				CONN.	TAPE SP.	TENS	. AD.				10:	1			-				
WR-BIAS1			40	22		7 7	-		N N					AUDIO				C H 1						-				
WR-BIAS2				42		7 7	-		N N					AUDIO.				CH2						-				
WR-REC1				22			-		N N					1 dua				CH1						-				
WR-REG2				1 42			-		N N					I DUA				CH2			-			-				
WR-REPR1			40			5 5	-		N N					AUD I				CH1										
WR-REPR2			40			5 5	-	-,-	N N					I GUA				CH2						-				

## 6. GENERAL DIAGRAMS

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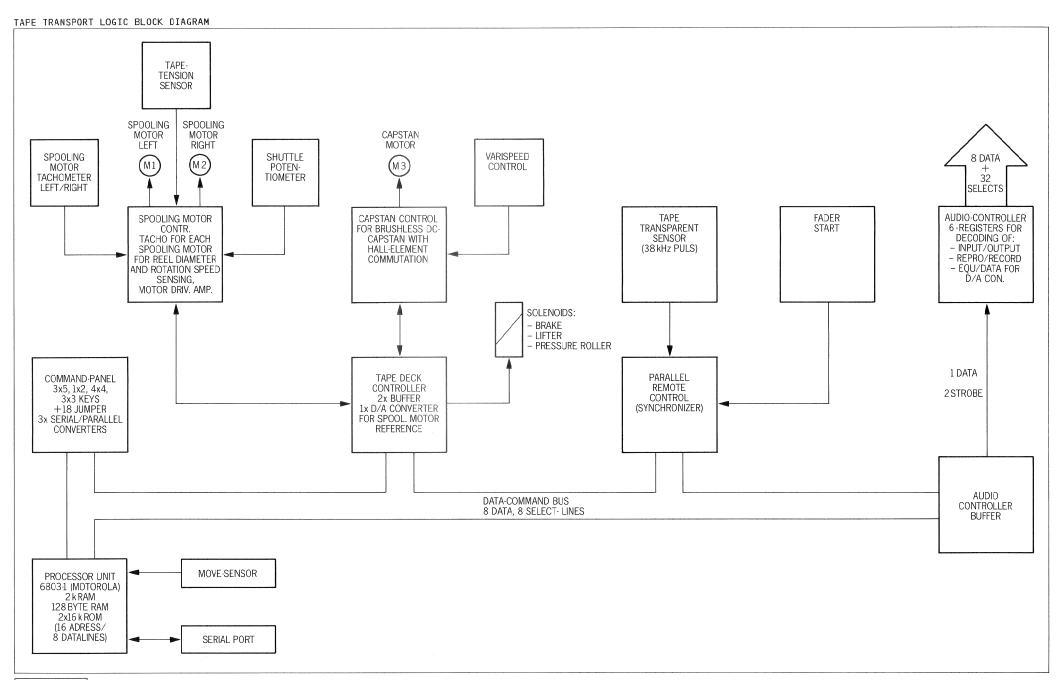
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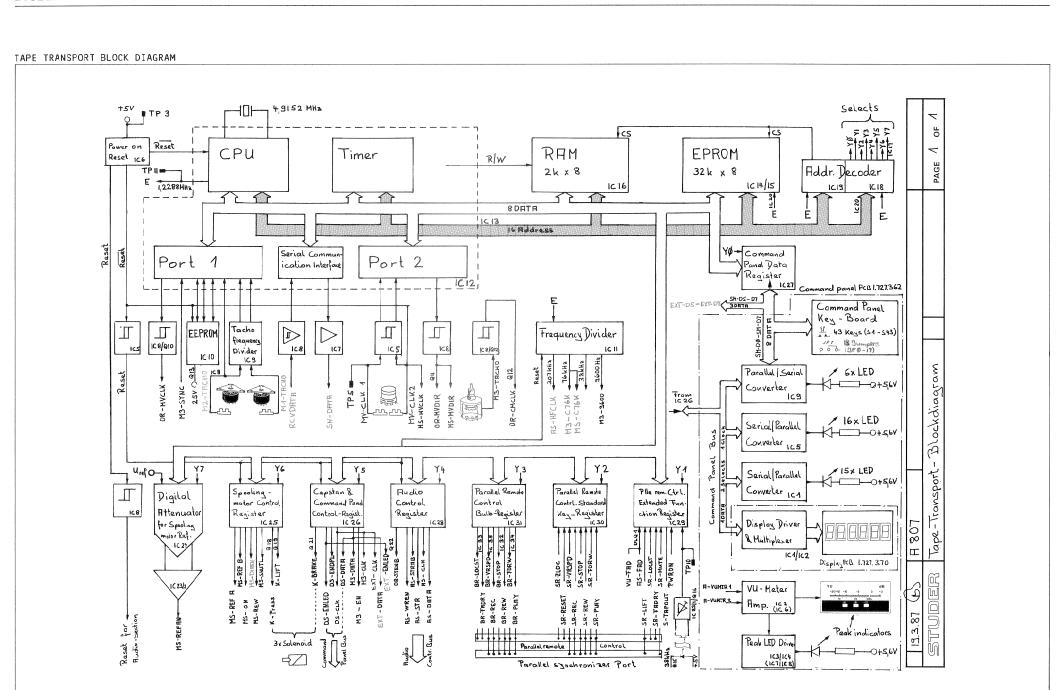
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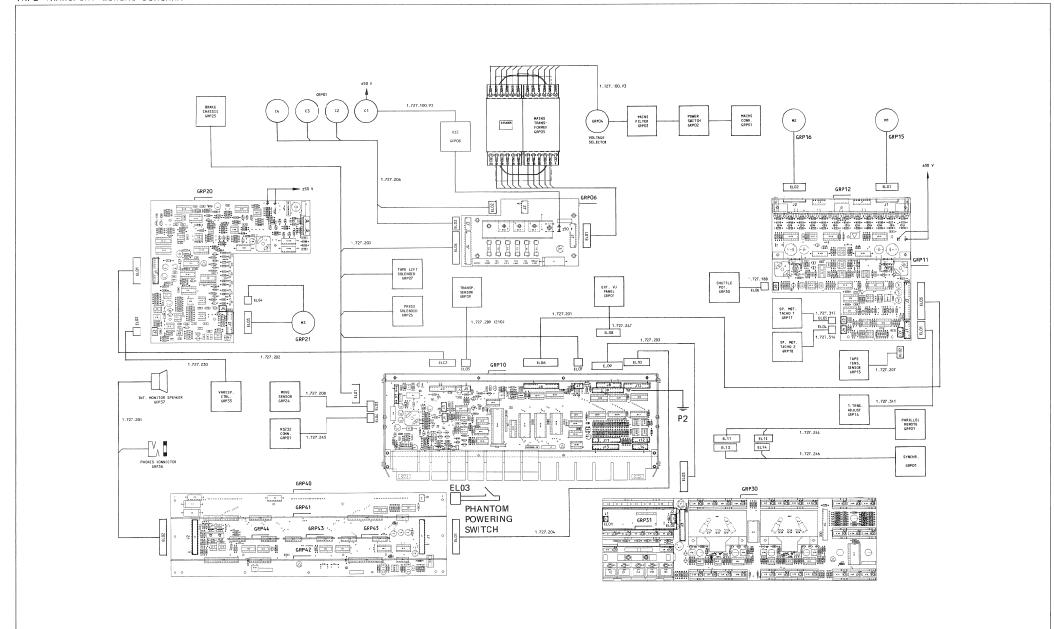
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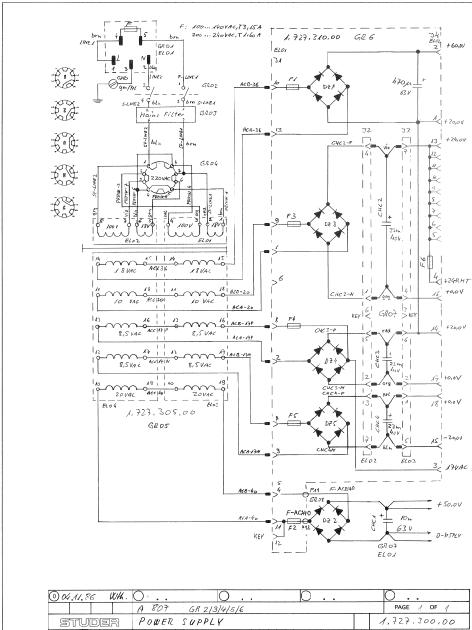


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TAPE TRANSPORT WIRING DIAGRAM



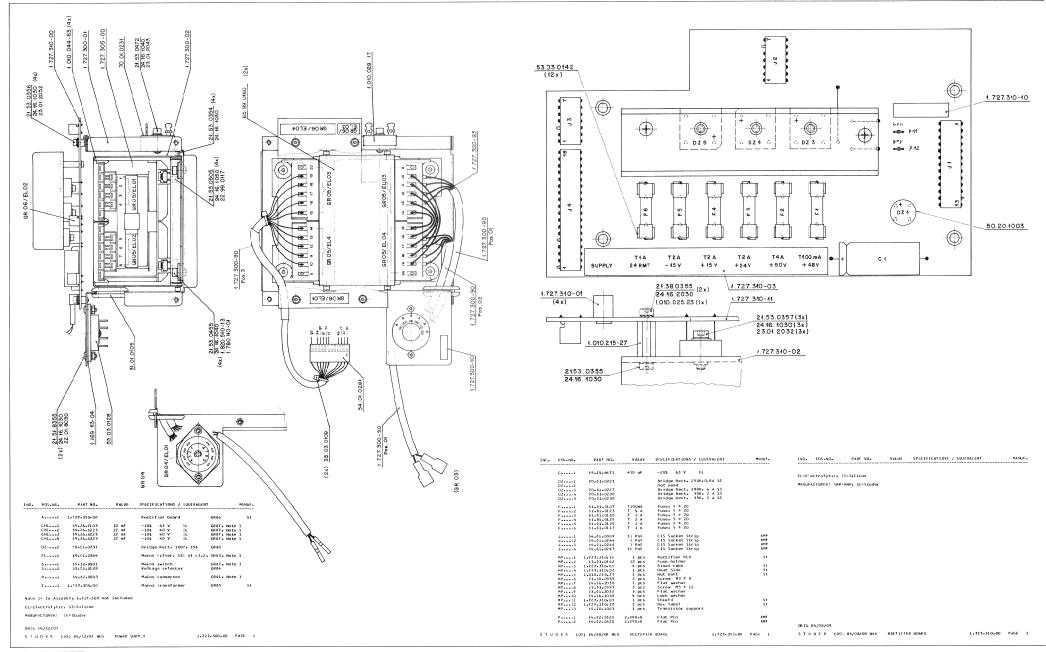
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		A 807	GR 2/3/4/5/6			PAGE /	OF /
STU	DER	POWER	SUPPLY		1	1,727,30	00,00

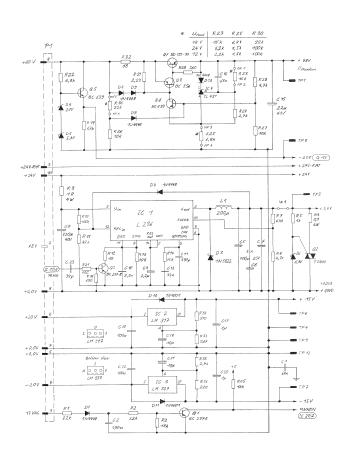
#### POWER SUPPLY 1.727.300.00 GRP2/3/4/5/6

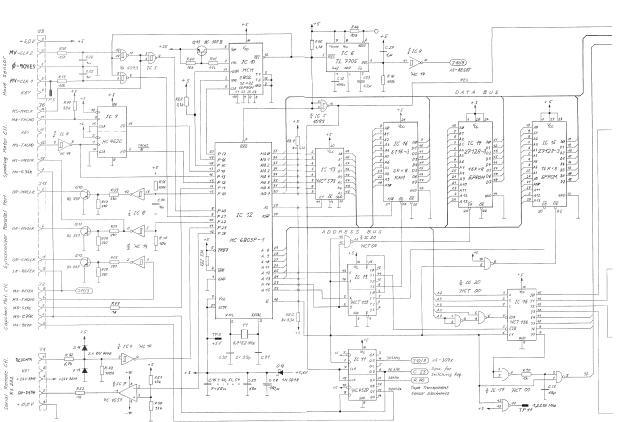
#### RECTIFIER 1.727.310.00 GRP6





TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10



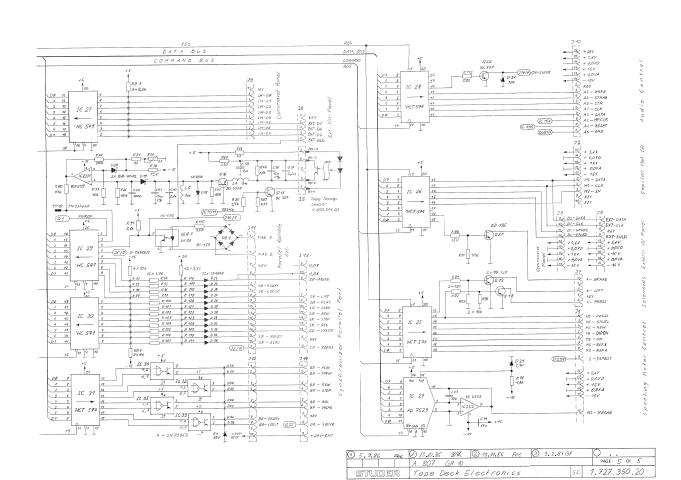


€ 5.9.36 lec	13.10.86 WH. 2 10.11.86 Rec 3 9.2.87 GP	0
	A 807 GR 10	PAGE 3 OF 5
STUDER	Tape Deck Electronics Sc 1	1.727.350.20



6/10

#### TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10

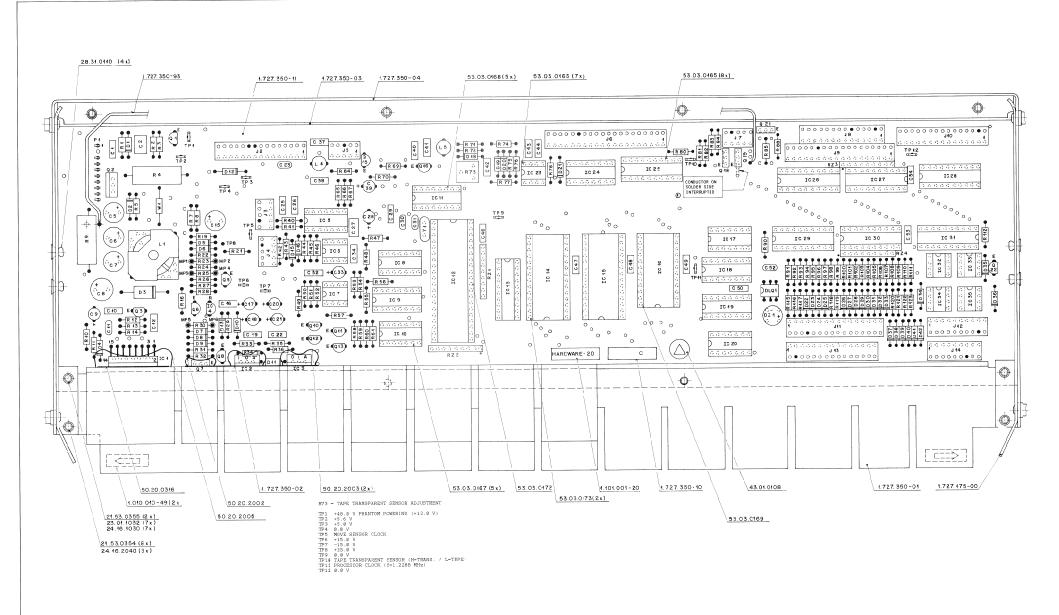




TAPE DECK ELECTRONICS 1.727.350.20 GRP10 28.31.0110 (4x) 1.727.350-93 1.727.350 - 11 1.727.350-03 1.727.350-04 53.03.0168(5x) 53.03.0166 (7x) 53.03.0465 (8x) 000000000000000 TP 42 C 23 ● R 69 ● E (Q 46) ○ IC 25 IC 24 + (39) 0 0 C38 • • • EC 28 IC 26 IC27 TF4 o IC 44 TP 9 0 6 R 40 6 IC 5 % **⊕**\_R47\_**⊕** 1C 17 C32 + (C33) C 52 ိုင္ပေ D 3 C 50 DILQI 107 IC 9 888 (9) (10) E (Q2) (R 12) (R 12) (R 13) IC 49 ● R57 ● 00 C19 C22 0 00000000000 D9 E R35 R35 R35 R36 R36 R36 R36 0 E (Q13) IC 20 J 43 HARDWARE- 20 0 000000000 0 Φ 0 1.727.350-02 50.20,2003 (2x) 50.20.0316 53.03.0167 |5x) \53.03.0172 1.727.350-10 1.101.001 - 20 43.01.0108 1.727.350-01 1.727.175-00/ 53.03.0173(2x) 1.010.010-49(2x 50.20.2002 21.53.0355 (2 x) 23.01.1032 (7x) 24.16.1030 (7x) 50.20.2005 53.03.0169 21.53.0354 (8x) 24.16.2040 (3x)

### TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10





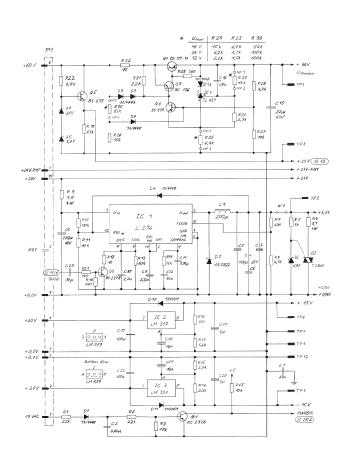


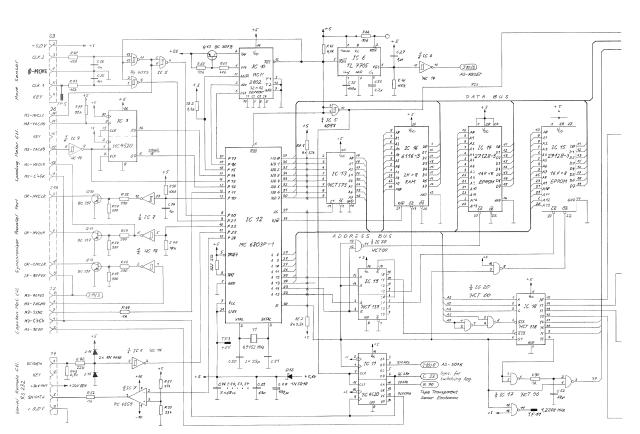
#### TAPE DECK ELECTRONICS 1.727.350.20/21/22 GRP10

THE BEST EEE THOMAS THE TOTAL STATE OF			
IND- FOS-NO- PART NO- VALUE SPECIFICATIONS / EQUIVALENT MANUF-	IND. POSING. PART NO. VALUE SPECIFICATIONS / EQUITALENT MANUF.	(NO. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIFALENT MANUF.	INO. POS.NO. PIRT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.
(1 5%-00-0643 68 of 13% 63 y PETP (2 5%-00-0643 68 of 13% 63 y PETP (3 5%-00-0644 170 of 13% 63 y PETP (4 5%-00-0644 170 of 13% 63 y PETP (6 5%-00-0644 17	195	R23 57-11.4-682 b.8 kOme 12x 0.294; HF note 1 R24 57-11.4-103 lb kOme 12x 0.294; HF note 1 R25 27-11.4-103 lb kOme 12x 0.294; HF note 1 R26 27-11.4-103 lb kOme 12x 0.294; HF note 1 R26 27-11.4-103 lb kOme 12x 0.294; HF note 1 R31 57-11.4-22 37-2 kOme 12x 0.294; HF note 1 R33 57-11.4-23 22 27-2 kOme 12x 0.294; HF note 1 R33 57-11.4-23 22 27-2 kOme 12x 0.294; HF note 1	
C23 9x.3x.2300 39 pp 10x 33 V C81 C23 9x.3x.2300 39 pp 10x 33 V C81 C27 9x.0x.10102 1 nr 11x 33 V PEP C27 9x.0x.10102 1 nr 11x 33 V PEP C27 9x.0x.10103 1 nr 11x 33 V PEP C27 9x.0x.10104 100 nr 10x		Section   Sect	Y1 89.91.0560 4.9152MHz +-20 ppm+ NC 49 U+ Quartz ITT
IND. PDS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / IQUIVALENT MANUF.	1HO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  (Q1) 13-10-86 Improved interfacing between TIL- and CMOS-level.
C00 55-05-0683 od nf 13% 03 V PELP C00 55-0683 od nf 13% 03 V PELP C00 55-06	J11 %-GL-0794 16 Pole CLS Socket Strip AMF J12 %-GL-0794 16 Pole CLS Socket Strip AMF J12 %-GL-0794 16 Pole CLS Socket Strip AMF J14 %-GL-0217 9 Pole CLS Socket Strip AMF J14 34-CL-0217 9 Pole CLS Socket Strip AMF L1-1222-251.00 20094 Filter Coll St	167 3:11.6221 220 0he 22, 0.25W, MF 100 5:11.6332 33.80he 22, 0.25W, MF 110 5:11.6332 33.80he 22, 0.25W, MF (03) 111 5:11.64121 470 0he 22, 0.25W, MF (04) 112 5:11.64120 10 0he 22, 0.25W, MF 112 5:11.64121 4100 0he 22, 0.25W, MF	(Q1) 3-10-86 improved interfacing between TT- and CMS-level. (22) 10-1-16 Memory expension of the Transparent adjustment. (45) 11-15-27 Soft kare expansion for PMS Version. (55) 21-19-27 Soft kare expansion for SMS Version.
C53 59.06.0643 68 nF 10% 63 V PEIP C54 59.06.0643 68 nF 10% 63 V PEIP C1 50.04.0115 114448 55 V 02 50.04.1122 63 V 54 V	L	2 k0h 2 (30) 8 k - 74 5 (14) 14333 33 k0h 22 k0h 22 k0 2 k0 2 k0 2 k0 2 k0 2	Note 1 - Variable Phantom Supply U (V)   1
02 50.04.1122 6.3 V 3% 0.4 W 03 20.04.00 10.00	MP2 1.010.024.54 1 Pale Mrss Pin MP3 1.010.024.54 1 Pale Mrss Pin MP4 1.010.025.54 1 Pale Mrss Pin MP4 1.010.025.54 1 Pale Mrss Pin MP6 1.010.025.54 1 Pale Mrss Pin	1	40   15 k   6-8 k   22 k 24   6-2 k   1-5 k   100 k 12   2-2 k   1-5 k   100 k
57 35.03-0122 184449 55 V 59 35.03-0122 18449 55 V 510 35.03-0122 18490 1505 53 V 510 35.03-0122 18490 1505 53 V 512 35.03-0122 18490 1505 53 V 512 35.03-0122 18490 1505 53 V 512 35.03-0122 18490 1505 53 V	PF7 1-727-350-11 1 pre Pf. Sowid 51 PF9 1-727-350-01 1 pre Pf. Sowid 51 PF9 1-727-350-01 1 pre Pf. Mostsiak 51 PF0 1-727-350-02 1 pre France 51 PF10 1-727-350-02 1 pre Pf. Pf. Mostsiak 51 PF10 1-727-350-02 1 pre Pf. Pf. Mostsiak 51 PF10 1-727-350-02 1 pre Pf. Mo	k	EL = Electrolytic, PETP - Polyesterfoil, PP = Polypropylane MF = Metal Film : CEE - Ceramic  MANUFACTURES: ADI : Analog Device: Inc.
C1 \$50.04.0125   184408 \$50 V \$7. 3 A Schottky Advict \$50.04.0125   184408 \$7. 3 O. 4 H \$7.	Mex.   1.10.027-55   1 Pele   Wrap Pin	\$ 1.01   2.0	MANUFACTBREST BII : Analog Devices Inc.  AP : APP Incorporated  G1 : Gower1 Instruments  G2 : Source1 Instruments  G3 : SSSAtes  HD1 : Inderent  Mb1 : Motorola  Fh : Philips  II = Texas Instruments  Fh : Philips
029 50.04.0125 184448 50 V 030 50.04.0125 184448 50 V 5. TUDER [05] 87/09/23 WEN TWE DECK ELECTRONICS 1.727.150.20 PAGE 2	P	R105 51.11.4472 4-7 KOhn 224 D.2394 MF R106 51.11.4472 4-7 KOhn 224 D.2394 MF 5.TU DER (DS) 87/09/23 Mth TAPE DEKK ELECTRORICS 1.727-350-20 PAGE 8	ORIG 46/09/23 (01) 86/10/11 (02) 86/11/10 [03] 87/02/09 (04) 87/05/11 (05) 47/09/23 (05) 47/09/23 (05) 47/09/23 (05) 67/09/23 VEH TAPE DECK ELECTRONICS 1.727.350.20 PAGE 11
INO. 2051NO. PART NO. VALUE SPECIFICATIONS / ENUTYALENT MANUF.	INO. POS-NO. PART 10. FALUE SPECIFICATIONS / IQUIVALENT MANUF-	IND. FOS.NO. PART NJ. VALUE SPECIFICATIONS / EQUIVALENT MABUF.	
031 54.04-0125 184448 50 V  332 54.04-0125 184448 50 V  333 54.04-0125 184448 50 V  333 54.04-0125 184448 50 V  336 54.04-0125 10 V 55 0-4 M  340 54.04-0125 10 V 55 0-4 M	01 30.03.03.0 BC 237 B	**************************************	
021 76.01.0222 89159 E 35 C800 [C1 50.10.0110 L 296 Switching Seculator SGS	022 50-03-03-0 8C 337-25 NPN	\$Z1 57-88-4332 8#3-3kOhn 5% Single Line \$Z2 57-88-4332 8#3-3kOhn 5% Single Line	
(C2 59±10-0104 LM 317 (C3 59±10-0105 LM 317 (C3 59±10-0105 LM 317 (C3 59±107-0000 LM 317 (C5 59±107-0000 LM 317 (C5 59±10-0102 LM 7705 LM 317 (C5 59±10-012 LM 7705 LM 317 (C5 59±10-012 LM 317 (	8		
1C7 54.09.0107 RC 4559 uPC 4559 1C8 50:17-1014 74 HC 14 1C9 50:17-4520 74 HC 4520	R7 57:11:4971 470 Chm 2% 0.2394 ME R5 57:11:4972 4.7 KDM 2% 0.2394 ME R2 57:55:2109 1 Ohm 18% 4.6 M M/re R1 57:11:4973 47 KDM 2% 0.2394 ME	1P 3 54-02-0320 1 Pole Tab 1P 4 54-02-0320 1 Pole Tab 1P 5 54-02-0320 1 Pole Tab 1P 6 54-02-0320 1 Pole Tab	
[C1] 59.174-920 74 HC 45/20 [C12] 58.16-0.017 Mc608074 H0069397-1 1,259M1 MND5-uProcessor Mot.H1 [C13] 56.16-0.017 Mc608074 H0069397-1 1,259M1 MND5-uProcessor Mot.H1 [C14] 56.17-0.017 Mc61750 H0069397-1 Mc61750 H0069397-1 1,7274.1531.20 St.	R12 37.11.400 10 0hm 2% 0.2994 HF R13 37.11.403 10 kOhm 2% 0.2994 HF R14 37.11.403 15 kOhm 2% 0.2994 HF R14 37.11.403 15 kOhm 2% 0.2994 HF R19 37.11.403 47 kOhm 2% 0.2994 HF	1P7 5-02-0220 1 Folk Tab  (00) 1P8 5-02-0230 1 Folk Tab  (01) 1P8 5-02-0230 1 Folk Tab  (02) 1P8 5-02-0230 1 Folk Tab  (03) 1P9 5-02-0230 1 Folk Tab  (04) 1P11 5-02-0230 1 Folk Tab  (05) 1P11 5-02-0230 1 Folk Tab	
1	8		
S T J D E R (05; 87/09/23 Mth) TAPE DECK ELECTRORICS 1.727.350.20 PAGE 3	S T U 0 E R (05) 87/07/2) Wth TAPE DECK ELECTRONICS 1.727.350.20 PAGE 6	S T U D E R (05) 87/09/23 WEN THPE DECK ELECTRONICS 1.727.150.20 PAGE 9	



### TAPE DECK ELECTRONICS 1.727.350.23 GRP10

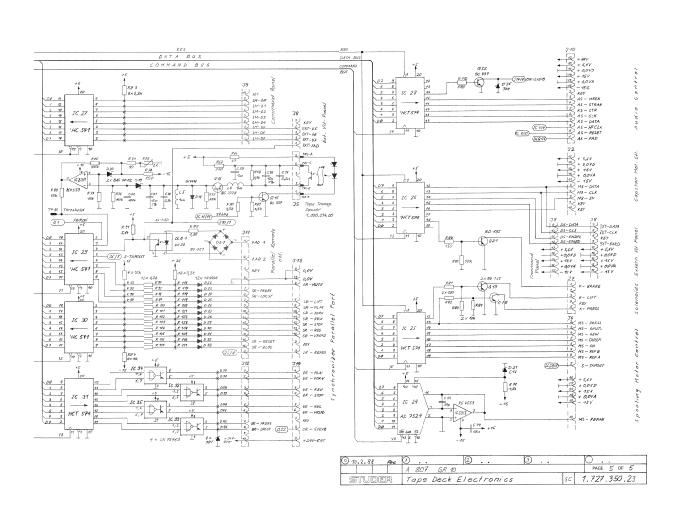




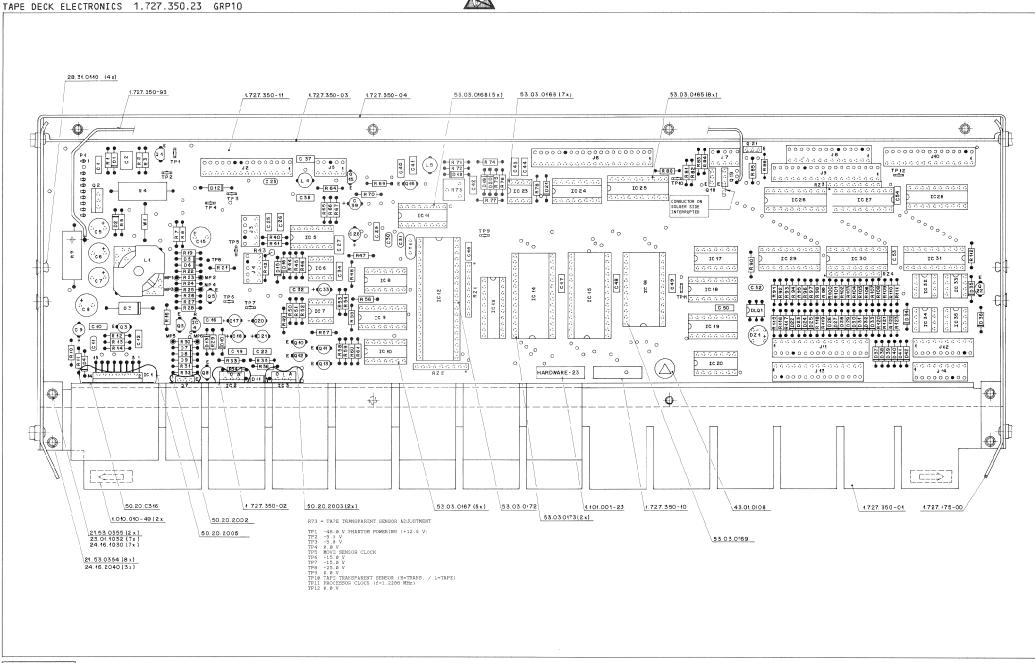
(1) 10.2.88 Rec	J	0
	A 807 GR 10	PAGE 3 OF 5
STUDER	Tape Deck Electronics sc	1.727.350.23



TAPE DECK ELECTRONICS 1.727.350.23 GRP10





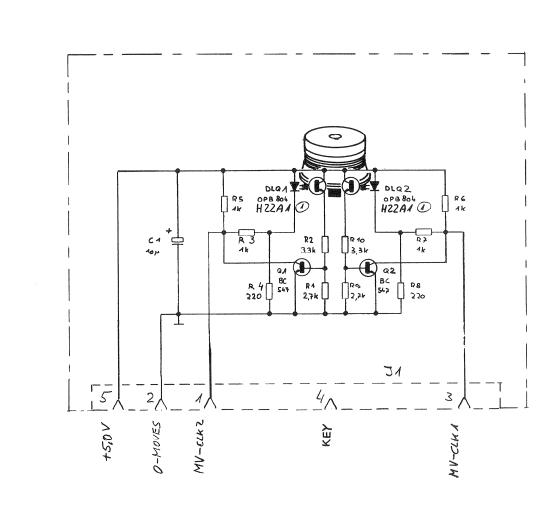




### TAPE DECK ELECTRONICS 1.727.350.23 GRP10

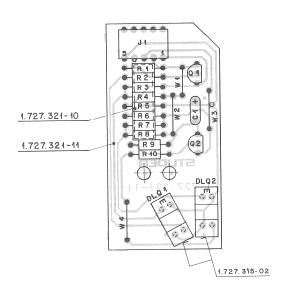
TAPE DECK ELECTRONICS 1.727.350.25 GRPTU			
ING. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NC. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. YALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. PGS.ND. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.
C	1623   30.09-0107   RC 4595   BR t 2/A Converter   ADD	R	XIC20   \$3.03.0105  22 Pole   IC Socket   XIC27   \$3.03.0105  32 Pole   IC Socket   XIC27   \$3.03.0105  32 Pole   IC Socket   XIC27   \$3.03.0105  32 Pole   IC Socket   XIC30   \$3.03.0105  33 Pole   IC Socket   XIC30   XIC30
IND. 205.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.AG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND- POS-NO- PART NO- VALUE SPECIFICATIONS / EQUIVALENT MANUF.	
100   100	### ### ### ### ### ### ### ### ### ##	R	
IND- POS-NO- PART NO. VALUE SPECIFICATIONS / EQUIPALENT MANUE.	ING. POS-NO. PERT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS.NG. PIRT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	
Da.   31   58.04-0225   1144-08   50 V	G 10 10-32-077	### 27.16.4332 #87.200a	

# TAPE MOVE SENSOR 1.727.321.00 GRP24



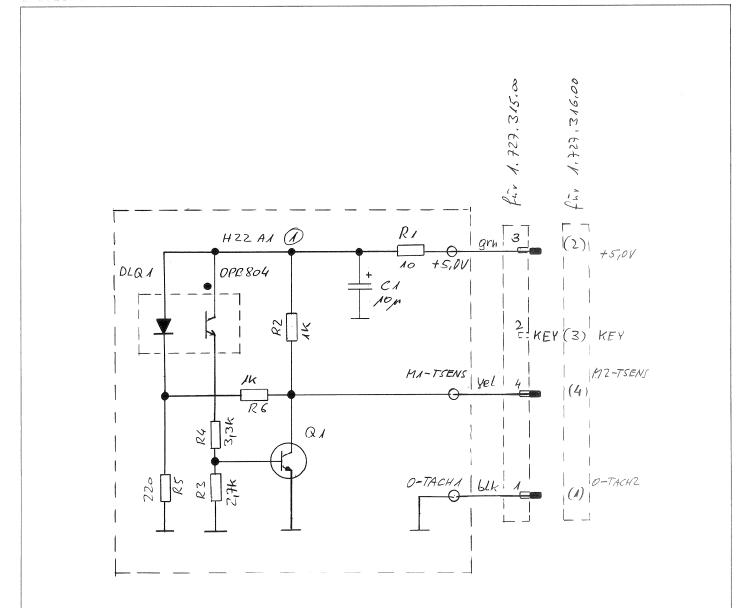
0/2	7.8.8	6	VH	13.11.8	+ WH.	0		0	I	$\circ$	
				A 807	GR 24					PAGE / OF /	
S	TU		iR	Move	Sensor	Bo	parol		1.	727,321,00	

## TAPE MOVE SENSOR 1.727.321.00 GRP24



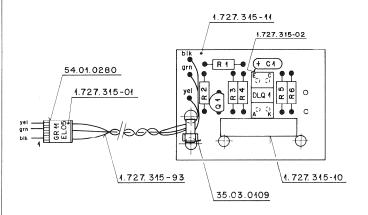
I NO .	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	T MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF
	C 1	59.26.2100	10 uF	20%, 16V, Sal	Ph	(01) Type change
(00)	DLQ1	50-04-2128	OPB804		0p	(UI) Type Change
(01)	DL J 1	50.04.2128	H22 A1		GE	Sal=Solid aluminium
(00)	DLQ2	50.04.2128	DP8804		Op	
(01)	DLQ2	50.04.2128	H2S A1		GE	MANUFACTURER: ITT=Intermetall, Mot=Motorola, Op=Optron, Ph=Philips, Sie=Siemens, Tf=Telefunken
	J1	54.01.0305	5 Pol	CIS Par.		Ste-Stemensy III-level oncen
	MP1	1-727-321-11	1 pce	Move Sensor PCB	St	
	MP 2	1.727.321.10	1 pce	No. Label	St	
(01)	MP 3	1-727-315-02	4 pce	Spacer	St	
	Q1 Q2	50.03.0436 50.03.0436	8C237B BC237B	BC547B, BC5508 BC547B, BC550B	ITT, Mot, Ph, Sie, Tf ITT, Mot, Ph, Sie, Tf	
	R 1	57.11.4272	2.7 kOhm	2% - D-25W - MF		
	R = = = = 2	57-11-4332	3+3 kOhm	2%, 0.25W, MF		
	R 3	57-11-4102	1 kOhm	2%, 0.25W, MF		
	R 4	57-11-4221	220 Ohm	2% 0.25W MF		
	R * * * * * 5	57.11.4102	1 kOhm	2%, 0.25W, MF		
	R 6	57-11-4102	1 kOhm	2%, 0.25W, MF		
	R7	57-11-4102	1 kOhm	2%, 0.25W, MF		
	R 8	57-11-4221	220 Ohm	2%, 0.25W, MF		
	R 9	57.11.4272	2.7 kOhm	2%, 0.25W, MF		
	R10	57.11.4332	3.3 kOhm	2%, 0.25H, MF		
	W 1	04+01-0106		wire Bridge		
	H	64.01.0106		wire Briage		
	W * * * * * 3	64.01.0106		Wire Bridge		
	H4	64.01.0106		Wire Bridge		
						ORIG 85/08/08 (01) 87/11/13
STU	DER (C	01) 87/11/13 Wth	MOVE SEN	SOR BOARD 1.72	7 - 321 - 00 PAGE 1	S T U D E R (01) 87/11/13 Wth MOVE SENSOR BOARD 1-727-321-00 PAGE
	5 L . (C	, S.,, E	JEN	3011 3011110		

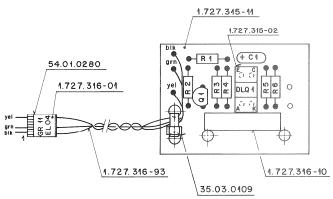
SPOOLING MOTOR TACHO LEFT 1.727.315.00 GRP17 SPOOLING MOTOR TACHO RIGHT 1.727.316.00 GRP18



004.11.86 WHh	1) 13.11.87 Wth O O	0
	A 807	PAGE A OF A
STUDER	SPOOLING MOTOR TACHO LEFT	1.727,315.00
	RIGHT	1,727,316,00

SPOOLING MOTOR TACHO LEFT 1.727.315.00 GRP17 SPOOLING MOTOR TACHO RIGHT 1.727.316.00 GRP18





IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALE?	NT
	C 1	59.26.2100	10 uF	20%, 16V, Sal	Ph		C1	59.26.2100	10 uF	20%, 16V, Sal	
(00)	DLQ1	50-04-2128	OP8604		Ор	(00)	DLQ1	50.04.2128	028804		
(01)	DtQ1	50.04.2128	H22 A1		GE	(01)	DLQ1	50.04.2128	H22 A1		
	MP1	1.727.315.11	1 pce	Sp.Motor Tacho PCB	St		MP1	1.727.315.11	1 pce	SpaMotor Tacho PCB	
	MP2	1.727.315.93	l pce	L-LST Sp.Motor Tacho,left	St		MP 2	1.727.316.93	1 pce	L-LST Sp.Motor Tachorright	
	MP3	54.01.0280	1 pce	CIS Case, 4 Pol	AMP		MP 3	54.01.0280	1 pce	CIS Case, 4 Pol	
	MP4	1.727.315.10	1 pce	No. Label	St		MP 4	1.727.316.10	1 pce	No. Label	
	MP 5	1.727.315.01	1 pce	Label • GR 11 EL 05	St		MP 5	1.727.316.01	1 pce	Label • GR 11 EL 04	
(01)	MP6	1.727.315.02	1 pce	Spacer	St	(01)	MP 6	1.727.315.02	1 pce	Spacer	
	Q • • • • • 1	50.03.0436	BC2378	BC547B, BC550B	ITT,Mot,Ph,Sie,Tf		Q 1	50.03.0436	BC2378	BC5478+ BC5508	ΙT
	R1	57.11.4100	10 Ohm	2% 0.25W MF			R1	57-11-4100	10 Ohm	2%, 0.25W, MF	
	R 2	57-11-4102	1 kOhm	2% • 0 • 25 W • MF			R • • • • 2	57-11-4102	1 kOhm	2%. 0.25W. MF	
	R3	57-11-4272	2.7 kOhm	2%. 0.25W. MF			R *** * 3	57-11-4272	2.7 kOhm	2%, 0.25W, MF	
	R 4	57-11-4332	3.3 kOhm	2%, 0.25W, MF			R 4	57.11.4332	3.3 kOhm	2%, 0.25W, MF	
	R 5	57-11-4221	220 Ohm	2%, 0.25W, MF			R 5	57-11-4221	220 Ohm	2%, 0.25W, MF	
	Resease	57.11.4102	1 kOhm	2% - 0 - 25W - MF			R * * * * * 6	57.11.4102	1 kOhm	2%, 0.25H, MF	

MANUFACTURER: ITT=Intermetall. Mot=Motorola. Op=Optron. Ph=Philips.
Sie=Siemens, Tf=Telefunken. St=Studer

ORIG 85/08/08 (01) 87/11/13

S T U D E R (01) 87/11/13 Wth SP-MOTOR TACHO BOARD+LEFT 1.727.315.00 PAGE 1

(01) Type change

Sal=Solid aluminium

MANUFACTURER: ITT=Intormetall, Mot=Motorola, Op=Optron, Ph=Philips, Sie=Siemens, Tf=Telefunken, St=Studer

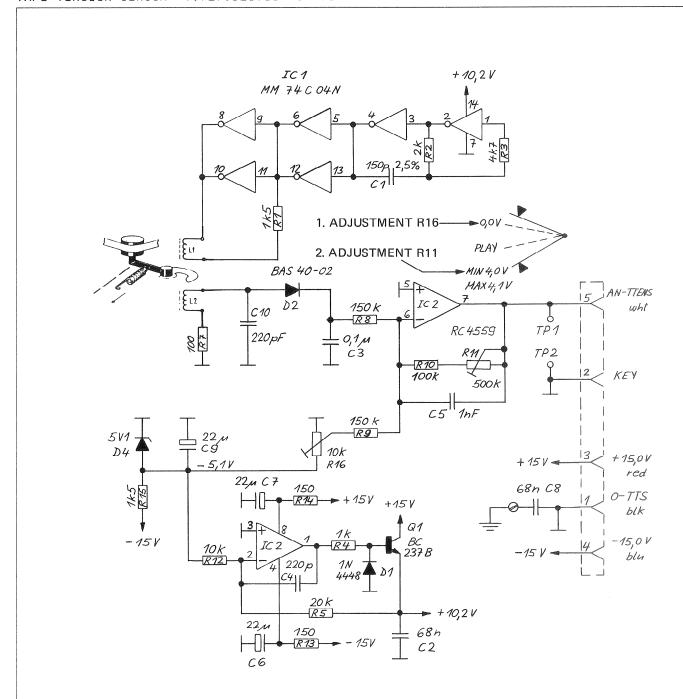
ORIG 86/08/08 (01) 87/11/13

S T U D E R (01) 87/11/13 Wth SP-MOTOR TACHO BOARD+RIGHT 1.727.316.00 PAGE 1

MANUF.

OP GE

### TAPE TENSION SENSOR 1.727.320.00 GRP13

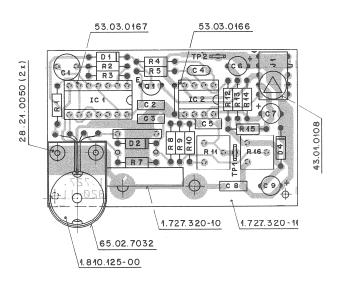


TP1=TAPE TENSON CONTROL VOLTAGE (+4V-0V) TP2=0V

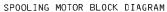
@ 20.11.85 GP	1 29.10.86 GP (	)	[O		$\bigcirc$ $\cdots$
	A 807 GR13				PAGE 1 OF 1
STUDER	TAPE TENSION	SENSOR	BOARD	SC	1,727.320.00

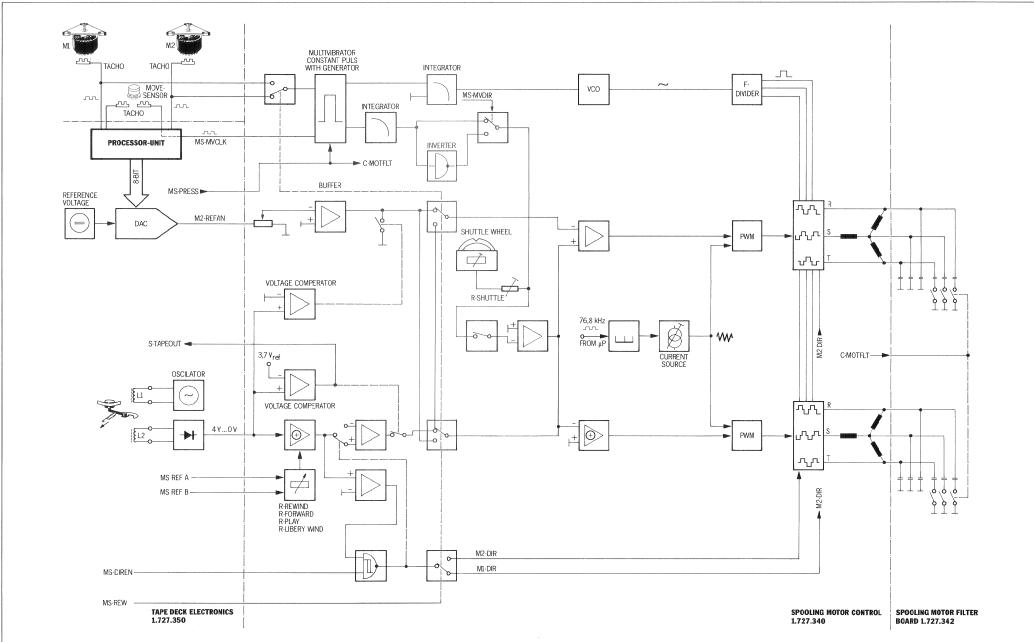


# TAPE TENSION SENSOR 1.727.320.00 GRP13



POS - NO -	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
		150 -5	3 CP - FOV - DP		(00)	0 4	67.11.6672	4.7 kObm	29. 0.75H- ME	
							5101104412		249 U-23W9 MF	
							67 11 //72		39 0 36H MC	
					(01)					
C10	59-11-6221	220 pF	5%, 50V, PC							
_										
	50.04.0127		BAT 42+ BAT 85			K****10	20.01.2103	10 KOIIII	1049 045 NV FCEFIII	
			45 6 411 7			TD 1	64 02 0220		01ug 2.8±0.8	
D4	50.04.1112	2.1 A	5%, U.4W, Zener							
						17 2	54.02.0320		Piug 2.0+0.0	
						v.t.c	£2.03.01/7	14 0-1-	IC-Socket	
IC ****2	50-09-0107	RC 4559	Dual Up-Amp							
Jeeeel	54.01.0305	5-Pole	CIS Socket Strip			AIL ***Z	53+03+0166	5-P016	IC-30CKEL	
			6-11							
L * * * * * 2	1.810.125.00		COLI							
MP 1	28.21.0050	2 pcs	tubular rivet 2.5÷17							
MP2		1 pcs								
MP3	1.727.320.11	1 pcs	TAPE TENSION SENSOR PCB							
MP 4	43.01.0108	1 pcs	ESE Warning label							
					(01)	29.10.86 Be	tter stability	or temperatu	ire	
Q1	50.03.0436	BC237B	BC547B, BC550B				0070-0-1			
							PEIN-NOIMEZEEL	, PP=POTYPIC	pyren, sr-siricon,	
									00-t	
					MANUF				is up=upcrons rn=rnilips+	
						210	5=216m6i)24  L=1	ererunken		
R * * * * * 5	57-11-3203	20 kOhm	2%, 0.25W, MF		ORIG	86/09/23	(01) 86/10/29			
	C1 C2 C3 C4 C5 C6 C7 C8 E9 C1 D2 D3 D3 D3 D3 D3 D3 D3 D3 D3 D3 D4 I.C. 1 I.C. 1 I.C. 1 I.C. 2 J1 D2 J1 D2 J1 D2 J1 D2 J1 D2 J1 D2 J1 D2 J1 D1 D2 J1 D2 J1 D2 J1 D2 J1 D.	C	C1 59-05-2151 150 pF C2 99-06-0683 68 nF C3 99-06-0108 68 nF C3 99-06-0108 68 nF C4 99-32-122 220 pF C5 99-32-122 220 pF C5 99-32-122 22 uF C6 59-06-0122 12 uF C7 99-22-5220 22 uF C1 59-11-6221 220 pF C9 99-22-5220 22 uF C1 59-11-6221 220 pF C1 50-04-0125 104498 D2 50-04-0127 BAS 40-02 D2 50-04-0127 BAS 40-02 D3 90-04-0127 BAS 40-02 D3 90-04-0127 BAS 40-02 D3 90-04-0127 BAS 40-02 D3 90-04-0127 BAS 40-02 D4 50-09-0107 RC4559 J1 50-09-0107 RC4559 J1 54-01-0305 5-Pole L1 1.810-125-00 L2 1.810-125-00 L2 1.810-125-00 L3 1.810-125-00 L3 1.810-125-00 L4 1.810-125-00 L4 1.810-125-00 L5 1.810-125-00 L5 1.810-125-00 L6 1.810-125-00 L7 1.810-125-00 L7 1.810-125-00 L	C1 59.05-2151 150 pF 2-5%, 50V, PP C2 59.06-0683 68 nF 10%, 50V, PETP 10%, 50V, 60V, 60V, 60V, 60V, 60V, 60V, 60V, 6	C1 59.05.2151 150 pF 2.5%, 50V, PP C2 59.06.0683 68 nF 10%, 50V, PETP C3 59.06.0104 0.1 uF 10X, 50V, PETP C3 59.06.0103 0.1 uF 10X, 50V, PETP C4 59.32.127 220 pF 10%, 50V, CET C5 59.06.0102 1 nn 10X 50V, PETP C7 59.22.520 22 uF 20%, 50V, CET C7 59.22.520 22 uF 20%, 50V, CET C7 59.22.520 22 uF 20%, 50V, FETP C7 59.22.520 22 uF 20%, 50V, FETP C9 59.26.0683 68 nF 10%, 50V, PETP C9 59.22.520 22 uF 20%, 50V, PETP C1 50.04.0127 BAS 40-02 BAT 42%, 3AT 85 D2 50.04.0127 BAS 40-02 BAT 42%, 3AT 85 D3 50.04.0127 BAS 40-02 BAT 42%, 3AT 85 D3 50.09.0127 BAS 40-02 BAT 42%, 3AT 85 D3 50.09.0127 BAS 40-02 BAT 42%, 3AT 85 D3 50.09.0167 BAT 40-02%, 3AT 85 D3 50.09.0167 BAT 40-0	C1 59,05-2151 150 pf 2-5%, 50V, PP (00) C2 59,06-0683 68 nf 10%, 50V, PETP (01) C3 59,06-0104 0-1 uf 10%, 50V, PETP (01) C4 59-32-1221 220 pf 10%, 50V, Cer (01) C5 59-32-1221 220 pf 10%, 50V, Cer (01) C7 59-32-3220 22 uf 2 uf 2 uf 2 uf 2 uf 2 uf 2 uf	C	C	C   59.05.2151   150 PF   2.5%, 50V, PP   (00) R6   57.11.4472   4-7 kOhn   C   59.06.0683   68 nF   10%, 50V, PETP   (01) R6   not used   C   59.06.0104   0.1 uF   10%, 50V, PETP   (00) R7   57.11.4172   4-7 kOhn   C   59.06.0104   0.1 uF   10%, 50V, PETP   (00) R7   57.11.4101   100 Ohn   C   59.06.0102   1 nF   10%, 50V, PETP   (01) R7   57.11.4101   100 Ohn   C   59.06.0102   1 nF   10%, 50V, PETP   (01) R7   57.11.4151   150 Ohn   C   59.06.0102   1 nF   10%, 50V, PETP   (01) R7   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   (01) R7   59.22.220   22 uF   -20%, 22V, E1   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4154   150 KOhn   C   59.06.0683   68 nF   10%, 50V, PETP   R   10   57.11.4151   150 Ohn   C   59.06.0683   88.06.02   88.42, 83.7 85   R   10   57.11.4151   150 Ohn   C   59.06.0127   BAS 40-02   BAT 42, 83.7 85   R   10   57.11.4151   150 Ohn   C   50.06.0127   BAS 40-02   BAT 42, 83.7 85   R   10   57.11.4151   150 Ohn   C   50.06.0127   BAS 40-02   BAT 42, 83.7 85   R   10   57.11.4151   150 Ohn   C   50.06.0127   BAS 40-02   BAT 42, 83.7 85   R   10   57.11.4151   150 Ohn   C   50.06.0127   BAS 40-02   BAT 42, 83.7 85   R   10   57.11.4151   150 Ohn   C   50.06.0127   BAS 40-02   BAT 42, 83.7 85   R	C1 59.05-2151 150 pf 2.5%, 50V, PP (00) R6 57-11-4472 4-7 kOhm 2%, 0.25W, MF (01) R6 57-11-4472 100 Ohm 2%, 0.25W, MF (01) R6 57-11-4472 120 Ohm 2%, 0.25W, MF (01) R6 57-11-451 100 Ohm 2%, 0.25W, MF (01) R6 57-11-452 120 Ohm 2%, 0.25W, MF (01) R.

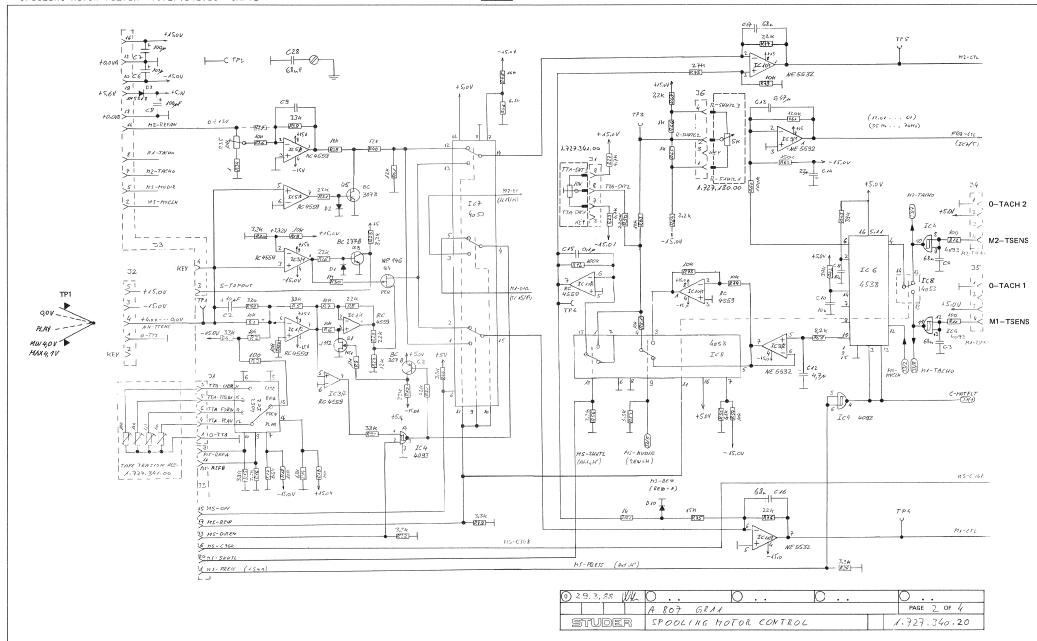




6/25

- SHUTTLE CONTROL 1.727.180.00
- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12



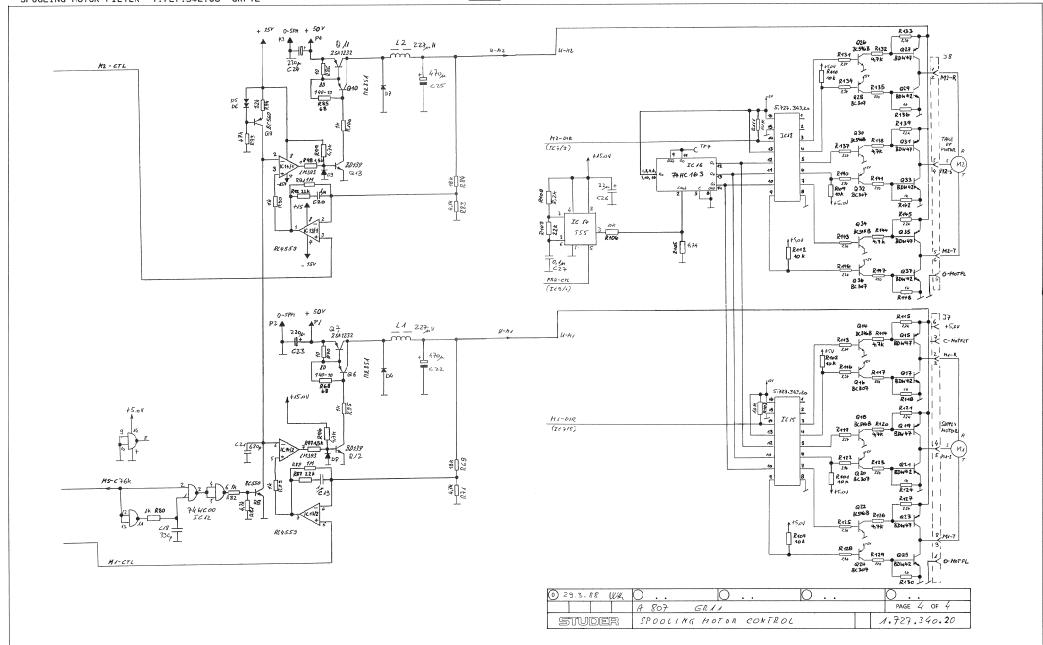


- SHUTTLE CONTROL 1.727.180.00

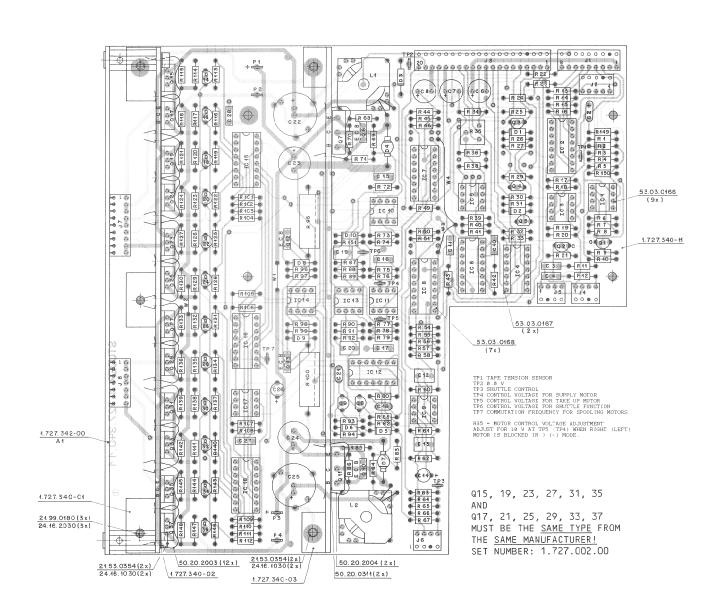
STUDER

- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12







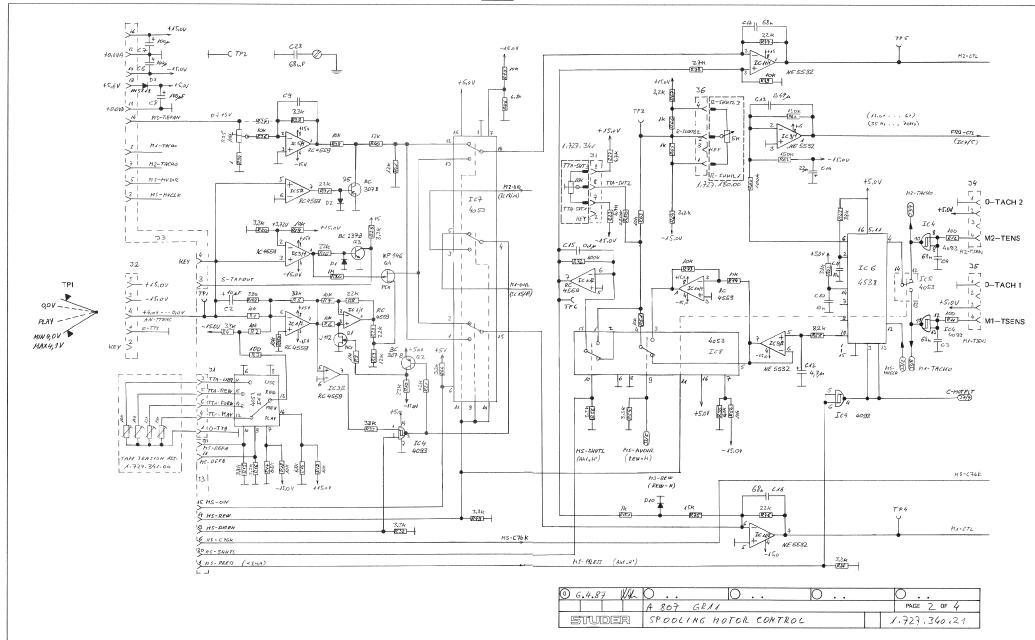




• POS+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	INO. POS.NO.	PART NO. \	ALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. PUS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	
A1 C1	1.727.342.00		Sp. Motor Filter Board	St		0.03.0515 BC3 0.03.0777 BDH 0.03.0491 BC5	42 NPN		R93 R94	57.11.4472 57.11.4122 57.56.4102 57.11.4472	4.7 k0ha		
C2 C3	59-26-2100 59-06-0683 59-06-0683	10 uF 68 nF 68 nF	20% 16 V SAL 10% 63 V PETP	Ph	423 5 424 5 425 5	0.03.08)2 8Db 0.03.0515 BC3	.7 040		R94 R95 R97 R97 R99 R100		1.2 Sohe 1.7 Sohe 1.8 Sohe 1.8 Sohe 1.9 Sohe 1.9 Sohe 1.1 Sohe 1.1 Sohe 1.1 Sohe 1.2 Sohe 1.3	23, 0.25%, MF 23, 0.25%, MF 53, 4 M, DI 53, 4 M, DI 24, 0.25%, MF 23, 0.25%, MF 24, 0.25%, MF 53, 4 M, DI 22, 0.25%, MF 23, 0.25%, MF 23, 0.25%, MF 23, 0.25%, MF	
C5 C7 C8	59-22-5101 59-22-5101 59-22-5101	100 uF 100 uF 100 uF	not used -20% 25 V EL -20% 25 V EI		4 24 5 4 25 5 6 26 5 6 27 5 6 28 5 9 29 5	0-03-0491 BC5 0-03-0802 BOH 0-03-0515 BC3 0-03-0777 BOH	47 PNP		R99 R100 R101	57-11-4152 57-11-4472 57-56-4102 57-11-4103 57-11-4103	4.7 kOhr 1 kOhr 10 kOhr	2%, 0.25H, MF 5%, 4 H, DR 2%, 0.25H, MF	
C9	59-06-0103	10 oF	not used 10% 63 V PETP 10% 63 V PETP		V30 5	0.03.0491 BC5 0.03.0802 BON 0.03.0515 BC5	46B NPh 47 PNF D7 PNF		R 103 R 104 R 105	57-11-4103 57-11-4103 57-11-4472	10 kOhr 10 kOhr 4.7 kOhr	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
C 13 C 14 C 15	59.06.0103 59.06.0474 59.06.0474 59.22.5220	10 nF 0.47uF 0.47uF 22 uF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP -20% 25 V EL 5% 63 V PETP 10% 63 V PETP		\$35 5 \$34 5 \$35 5	0.03.0777 BDF 0.03.0491 BC5 0.03.0802 BDF 0.03.0515 BC3	42 NPN 46B NPN 47 PNF D7 PNF 42 NPN		R 100 R 101 R 102 R 103 R 104 R 105 R 106 R 107 R 108 R 109	57-11-4103 57-11-4223 57-11-4822 57-11-4103	10 kOhr 22 kOhr 8-2 kOhr	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF	
C17	59.06.06474 59.22.5220 59.06.5104 59.06.0683 59.06.0683 59.34.4331 59.06.0105	22 uF 100 nF 68 nF 68 nF 330 pF 1 uF 1 uF	10% 63 V PETP 10% 63 V PETP 5% 63 V CER		\$37 5	0-03-0777 806	42 NPh kOhm 2% 0.25N NF		R *** 111 R *** 112	57-11-4103 57-11-4103 57-11-4103	10 kOhm 10 kOhm 10 kOhm	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF	
C20 C21 C22	59.06.0105 59.06.0105 59.32.1681 59.22.8471	1 uF 1 uF 680 pF	10% 63 V PETP 10% 63 V PETP 10% 50 V CER		62 5 63 5 84 5 85 5	7-11-4103 10 7-11-4101 100 7-11-4333 33	kOhm 2%, 0.25%, MF kOhm 2%, 0.25%, MF Ohm 2%, 0.25%, MF kOhm 2%, 0.25%, MF		R113 R114 R115 R116	57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4332 57-11-4472 57-11-4222 57-11-4392 57-11-4393 57-11-4102 57-11-4102	3.3 kOhm 4.7 kOhm 2.2 kOhm	23. 0.2544. MF 23. 0.2544. MF 24. 0.2544. MF	
C23 C24 C25 C26	59.22.8221 59.22.8221 59.22.8471 59.22.5220	640 pF 470 uF 220 uF 220 uF 210 uF 22 uF 100 nF 68 nF	1Ct 63 V PETP 52 63 V CER 1Ct 63 V PETP 1Ct 63 V PETP 1Ct 63 V PETP 1Ct 63 V EL -2Ct 63 V EL -2Ct 63 V EL -2Ct 25 V EL 52 63 V PETP		k7 5 k8 5	7-11-4333 33 7-11-4333 33 7-11-4103 10 7-11-4103 10 7-11-4223 22	KOhm 2%, 0.25W, MF KOhm 2%, 0.25W, MF KOhm 2%, 0.25W, MF KOhm 2%, 0.25W, MF		R117 R118 K119	57-11-4331 57-11-4102 57-11-4332	330 Ohm 1 kOhm 3-3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
C 26 C 27 C 28	59.06.5104 59.06.6683		10% 63 V PETP		k10 5	7.11.4333 33 7.11.4103 10 7.11.4103 10 7.11.4103 10 7.11.4105 1 7.11.4105 1 7.11.4105 1 7.11.4101 10 7.11.4101 10 7.11.4101 10 7.11.4101 10 7.11.4103 10 7.11.4032 3.2 7.11.4032 3.2 7.11.4032 3.2	MOhm 2%, 0.25M, MF kGhm 2%, 0.25M, MF Ohm 2%, 0.25M, MF		R *** 120 R *** 121 R *** 122 R *** 123	57-11-4102 57-11-4332 57-11-4222 57-11-4222 57-11-4332 57-11-4332 57-11-4472 57-11-4322 57-11-4322 57-11-4322	4.7 kOhm 2.2 kOhm 3.9 kOhm 330 Ohm	23. 0.25% HF 23. 0.25% MF 24. 0.25% MF 24. 0.25% MF 24. 0.25% MF 23. 0.25% MF 23. 0.25% MF 23. 0.25% MF 24. 0.25% MF 25. 0.25% MF 25. 0.25% MF 25. 0.25% MF 25. 0.25% MF	
D2 D3	50.04.0125 50.04.0125 50.04.0512 50.04.0509	184448 184448 185818	Diode 50 V SI Diode 50 V SI Diode 30 V Schottky Diode 100 V SI Diode 50 V SI Diode 50 V SI		A12 5 R13 5 R14 5 R15 5	7.11.4103 10 7.11.4632 6.8 7.11.4332 3.3	Ohm 2%, 0.25M, MF KOhm 2%, 0.25M, MF KOhm 2%, 0.25M, MF KOhm 2%, 0.25M, MF		R *** 124 R *** 125 R *** 126	57.11.4102 57.11.4332 57.11.4472	1 kOhm 3.3 kOhm 4.7 kOhm	2%, 0.25W, NF 2%, 0.25W, MF 2%, 0.25W, MF	
D5 D6	50-04-0509 50-04-0125 50-04-0125	MR851 1N4448 1N4448	Diode 100 V SI Diode 50 V SI Diode 50 V SI		118 5	7.11.4103 10	kOhm 2%, 0=25N, MF kOhm 2%, 0=25N, MF kOhm 2%, 0=25N, MF		R 127 K 128 K 129	57-11-4222 57-11-4392 57-11-4331	2+2 k0hm 3+9 k0hm 330 Ohm	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF	
DER (OC	00) 36/10/14 With	SPOOL ING	MOTOR CTL. BOARD ◆ 1.727.340.20	PAGE 1	STUDER (DOIS	6/10/14 Wth SP	OOL!NG HOTOR CTL. BOARD # 1.727.	40.20 PAGE 4	S TUDER (OC	) 86/10/14 Wth	SPOCLING HI	OTOR CTL. 80 ARD ≎ 1.727.340.	20 PA
P 05 + N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU#.	IND. POS.NO.		NLUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.		SPECIFICATIONS / EQUIVALENT	
D8 D9 D9	50.04.0509 50.04.0125 50.04.0125 50.04.0125	MR 651 184448 184448 184448	Dicde 100 V SI Dicde 50 V SI Dicde 50 V SI Dicde 50 V SI		R19 5 R20 5 R21 5	7-11-4103 10 7-11-4312 3-3 7-11-4223 22 7-11-4412 4-7 7-11-4412 4-7 7-11-4312 3-3 7-11-4312 3-3 7-11-4312 3-3 7-11-4312 32 7-11-4123 12	KOhm 2 k, 0 - 25M - NF-		R130 R131 R132	57-11-4102 57-11-4322 57-11-4472 57-11-4472 57-11-4272 57-11-4331 57-11-4331 57-11-4332 57-11-4322 57-11-4322 57-11-4322 57-11-4322 57-11-4322 57-11-4323 57-11-4323 57-11-4323 57-11-4323 57-11-4323 57-11-4323 57-11-4323 57-11-4323 57-11-4323	1 k0hm 3-3 k0hm 4-7 k0hm 2-2 k0hm 2-2 k0hm 3-3 k0hm 1 k0hm 3-3 k0hm 4-7 k0hm 3-3 k0hm 3-9 k0hm	22- 0-234- HP 22- 0-2354- HP	
161 162 163	50.09.0107 50.07.0024 50.09.0107 50.07.0008	RC4559 HC 14052 RC4559	Dual Op- Amp- Dual 4-Ch Analog Switch+ CMOS Dual Op- Amp- Quad 2-Input NAND Sm-Triger CMOS		8 23 5 8 24 5 8 25 5	7-11-4472 4.7 7-11-4332 3.3 7-11-4332 3.3	kOhm 2& 0.25H HF kOhm 2& 0.25H HF kOhm 2& 0.25H HF		R132 R133 R135 R136 R136 R138 R139 R140 R140 R140 R140 R140 R140 R140 R140 R140 R140 R140 R140	57-11-4392 57-11-4331 57-11-4102	3.9 kOhm 330 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
1C5 1C5 1C6	50-07-0008 50-09-0107 50-07-0538 50-07-0015	4093 RC4559	Quad 2-Input NAND SmaTriger CMOS Oual Opa Ampa Moroflop CMOS		R26 5 R27 5 R28	7-11-4223 22 7-11-4123 12 7-11-4223 22	kOhm 2% 0-25M, NF kOhm 2% 0-25M, NF not used kOhm 2% 0-25M, NF		R137 R138 R139	57-11-4332 57-11-4472 57-11-4222 57-11-4392	3.3 kOhm 4.7 kOhm 2.2 kOhm 3.9 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
IC7 IC8 IC9	50.07.0015 50.09.0107	MC 14053 MC 14053 RC4559 RC4559	Triple 3-ch Analog Switch, CMOS Triple 3-ch Analog Switch, CMOS Dual Op. Amp.		H30 5 H31 5 H32 5	7-11-4105 1 7-11-4223 22 7-11-4332 3-3	MOhm 2% 0.25M HF kOhm 2% 0.25M HF kOhm 2% 0.25M HF		R191 R192 R193	57-11-4331 57-11-4102 57-11-4332	330 Ohm 1 kOhm 3-3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
1C12 1C12	50-09-0107 50-09-0107 50-17-1000 50-09-0107	RC4559 74 HC 00 RC4559 LM 393	Dual Op. Amp. Quad 2-Input NANO Gate Dual Op. Amp.		R35 5 R36 5 R36 5	7-11-4223 22 7-11-4105 1 7-11-4223 22 7-11-4332 3-3 7-11-4333 33 7-11-4109 1 8-01-8103 10 7-11-4103 10	No.		R 144 R 145 R 146 R 147	57-11-4972 57-11-4222 57-11-4392 57-11-4331	4.7 kOhm 2.2 kOhm 3.9 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
IC	50.05.0283 50.05.0206 50.17.1163 50.05.0158 50.05.0206	LM 393 74 HC 163 NE 555 CN	Quad 2-input NAMD Serfriger CMOS Dual Que Ames Seriple 3-Ch Analog Switch, CMOS Dual Que Amp. Dual Compretor Sp. Motor Commutation (tl. 1-727) MCDOS	343+20 St	R37 R38 5 R39 5		not used kOhm 2t+ 0-25M+ HF kOhm 2t+ 0-25M+ HF		R148 R149 R150 R151	57-11-4102 57-11-4331 57-11-4103	1 kOhm 330 Ohm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
J18		9-POLE 5-POLE	Sp. Motor Commutation (t1. 1.727.	343-20 St AMP	K41 5 K42 5 K43 5	7-11-4333 33 7-11-4103 10 7-11-4123 12 7-11-4333 39 7-11-4333 39 7-11-4312 3-3 7-11-4312 10 7-11-4682 6-8	NOTE USED  KOTH 2			54-02-0320 54-02-0320	1 30111	Test Point Test Point	
J2 J3 J4 J5 J6	54-01-0217 54-01-0285 54-01-0226 54-01-0241 54-01-0241 54-01-0241 54-01-0217	5-POLE 20-POLE 4-POLE 4-POLE	C13 Socket Strip	AMP AMP AMP	1	7.11.4332 3.3 7.11.4103 10 7.11.4682 6.8	KUIM 240 U+23M 9 NF		TP2 TP3 TP4 TP5	54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320		Test Point	
J6 J7 J8	54.01.0241 54.01.0217 54.01.0218	4-POLE 9-POLE 1-POLE	C15 Socket Strip C15 Socket Strip C15 Socket Strip	AMP AMP AMP AMP	R48 R49 5 K50 5	7.11.4332 3.3 7.11.4224 220 7.11.4103 10	net used net		TP7 TP7	54.02.032C		Test Point Wire Bridge	
	1.022.316.00 1.022.316.00	227 uH 227 uH	HF-COIL HF-COIL		R52 R53 R54 5		not used kOhm 21. 0.25M. MF		W2 W4	64.01.0106 64.01.0106 1.010.101.64 1.010.109.64		Wire Bridge Wire Bridge Wire Bridge Wire Bridge	
	1•727•340•11 00) 86/10/14 Wth	1 pce SPOOLING	Spooling Motor Ctl. PC8 MOTOR CTL. 3DARD * 1.727.340.20	St PAGE Z	K****55 5 S T U D E R   100 ) B			%0+20 PAGE 5	XIC1 STUDER (0)	53.03.0166 D) 86/10/14 Wth		IC Socket DTOR CTL. BOARD * 1.721.340.	20 P.A
P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.	1NO. POS.NO.	PART NO. 1	ALUE SPECIFICATIONS / EQUIVALENT	MA NUF.	IND. POS.NO.	PART NO.	VALUE :	SPECIFICATIONS / EQUIVALENT	
нр	1-727-340-01	1 pce 1 pce	Heatsink Thermoisolator	St St	k56 5 k57 5	T-11-4332 3-1 T-11-4332 3-3 T-11-4623 82	kOhm 2% 0.25W HF kOhm 2% 0.25W HF kOhm 2% 0.25W HF		XIL2 XIC3 XIC4	53.03.0168 53.03.0166 53.03.0167	16 Pole 8 Pole	IC Socket IC Socket IC Socket	
HP3 HP4	1-727-340-02 50-20-2003 1-727-340-03	12 pcs 1 pce	Heatsink	St					XIC 5	53-03-0166	8 Pole		
HP5 HP5 HP5 HP7 HP8	1-727.340.02 50-20-2003 1-727.340.03 50-20-0311 50-20-0304 21-99-0180	12 pcs 1 pce 2 pcs 2 pcs 3 pcs	Heatsink Thermoisolator Honting Clip Screw M3 = 5	St			kOhm 2% 0-25W MF kOhm 2% 0-25W MF kOhm 2% 0-25W MF		XIC5 XIC6 XIC7 XIC8	53.03.0166 53.03.0168 53.03.0168 53.03.0168	8 Pole 16 Pole 16 Pole 16 Pole	IC Socket IC Socket IC Socket	
MP3 MP4 MP5 MP6 MP7 MP8 MP9 MP10 MP11 MP12	1-727.340.02 50.20.2003 1-727.340.03 50.20.0311 50.20.2004 21.99.0180 21.53.0354 24.16.1030 24.16.2030 1-727.340.10	12 pcs 1 pce 2 pcs 2 pcs 3 pcs 4 pcs 4 pcs 4 pcs 3 pcs 1 pce	Heatsink Thermalisolator Honting Clip Screw M3 = 5 Scraw M3 = 6 Lock Heacher Flat Hacher NO. Lobel				kOhm 2% 0-25% HF kOhm 2% 0-25% HF		XIC5 XIC6 XIC7 XIC8 XIC9 XIC10 XIC11	53.03.0166 53.03.0168 53.03.0168 53.03.0168 53.03.0166 53.03.0166 53.03.0166 53.03.0167	16 Pole 8 Pole 14 Pole 8 Pole 16 Pole 16 Pole 16 Pole 16 Pole 8 Pole 8 Pole 8 Pole 14 Pole	IC Socket	
MP3 MP4 MP5 MP6 MP7 NP8 MP10 MP11 MP12 MP13	1-727.340.01 1-727.340.02 50.20.2003 1-727.340.03 50.20.2003 21.29.0131 50.20.2004 21.53.0354 24.16.1030 24.16.2030 1-727.340.10 43.01.0108	1 pce 12 pcs 1 pce 2 pcs 2 pcs 2 pcs 3 pcs 4 pcs 4 pcs 3 pcs 1 pce 1 pce	Heats ink Thermais olator Monting Clip Heats ink Heats i	St			kOhm 2x, 0-254+ MF kOhn 2x, 0-254+ MF		XIC5 XIC6 XIC7 XIC8 XIC9 XIC9 XIC10 XIC12 XIC13 XIC14 XIC15	53.03.01.66 53.03.01.68 53.03.01.68 53.03.01.66 53.03.01.66 53.03.01.66 53.03.01.67 53.03.01.67 53.03.01.68	8 Pole 16 Pole 16 Pole 8 Pole 8 Pole 8 Pole 9 Pole 8 Pole 14 Pole 8 Pole 8 Pole 16 Pole	IC Socket	
P1 P3 P4	54.02.0320 54.02.0320 54.02.0320 54.02.0320		PLUG 2-8 > 0.8 PLUG 2-8 > 0.8 PLUG 2-8 > 0.8 PLUG 2-8 > 0.8				Kühne 23- 0-254- NF Kühne 23- 0-254- NF Kühne 24- 0-254- NF Kühne 23- 0-254- NF Kühne 23- 0-254- NF Kühne 23- 0-254- NF Kühne 23- 0-254- NF Kühne 24- 0-254- NF Kühne 23- 0-254- NF		XIC 3 XII 4 XII 5 XII 5 XII 5 XII 5 XII 6 XII	53.03.0168 53.03.0166 53.03.0167 53.03.0166 53.03.0168 53.03.0168 53.03.0168 53.03.0168 53.03.0169 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0168	8 Pole 16 Pole 16 Pole 16 Pole 26 Pole 8 Pole 8 Pole 8 Pole 8 Pole 16 Pole 8 Pole 16 Pole 16 Pole 9 Pole 16 Pole	IC Socket	
P2 P3 P4	54.02.0320 54.02.0320 54.02.0320 54.02.0320	MPF 4392	PLUG 2.8 * 0.8 PLUG 2.8 * 0.8 PLUG 2.8 * 0.8 PLUG 2.8 * 0.8	St			Schm 224 0-234 of F  Schm 224 0-254 of F		XII 5 XII 6 XII 6 XII 7 XII 10 XII 10 XII 12 XII 13 XII 14 XII 13 XII 14 XII 17 XII 18	53.03.0166 53.03.0168 53.03.0168 53.03.0168 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	8 Pole 16 Pole 16 Pole 16 Pole 8 Pole 8 Pole 8 Pole 8 Pole 14 Pole 8 Pole 16 Pole 16 Pole 16 Pole 16 Pole	IC Socket IC Socket IC Socket	
P2 P3 P4	54.02.0320 54.02.0320 54.02.0320 54.02.0320 50.03.0350 50.03.0436 50.03.0436 50.03.03.0515 50.03.0515 50.03.0515	NPF 4392 8C307 8C2378 MP 146 BC307 80140-10 25A1232	PLUG 2-8 > 0.8 PLUG 2-9 > 0.8 PLUG 2-9 > 0.8 PLUG 2-9 > 0.8 PLUG 2-8 > 0.8 PLUG 2-8 > 0.8 PLUG 2-9 > 0.8 PAP PCH P-CH PCH PCH PCH PPP PPP	St			Schola 254, 0-2544 of F		XIL5 XIL6 XIL6 XIL6 XIL6 XIL6 XIL6 XIL6 XIL16 XIL16 XIL16 XIL16	53-03-0166 53-03-0168 53-03-0168 53-03-0168 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0166 53-03-0168	B Pole 16 Pole 16 Pole 16 Pole 8 Pole 8 Pole 8 Pole 8 Pole 16 Pole 8 Pole 16 Pole 16 Pole 16 Pole 16 Pole	IC Socket IC Socket IC Socket	
P1 P2 P3 P4 Q1 Q2 U3 Q5 Q5 Q7 Q8 Q9	54-02-0320 54-02-0320 54-02-0320 54-02-0320 50-03-0515 50-03-045 50-03-0515 50-03-0515 50-03-0515 50-03-0516 50-03-0516	NPF 4392 6C307 8C237B HF 146 BC307 80140-10 25A1232 9C237B BC307 80140-10	PLUG 2.8 * 0.8 PLUG 2.8 * 0.8 PLUG 2.8 * 0.8 PLUG 2.8 * 0.8	St			ACM 224 0.2594 mf  KOM 225 0.2594 mf		XII	53-03-0160 53-03-0108 53-03-0108 53-03-0108 53-03-0100 53-03-0100 53-03-0100 53-03-0100 53-03-0100 53-03-0100 53-03-0100 53-03-0100 53-03-0100 53-03-0100	B Pole 16 Pole 16 Pole 16 Pole 25 Pole 8 Pole 8 Pole 16 Pole 8 Pole 16 Pole 16 Pole 16 Pole 16 Pole 16 Pole	IC Socket IC Socket IC Socket	
P1 P2 P3 P4 Q1 Q1 Q5 Q5 Q6 Q7 Q8 Q9 Q1 Q1 Q1 Q1 Q1 Q1	54.02.0320 54.02.0320 54.02.0320 54.02.0320 50.03.0315 50.03.0355 50.03.0355 50.03.0355 50.03.0515 50.03.0515 50.03.0515 50.03.0515 50.03.0515 50.03.0515 50.03.0515 50.03.0515	MPF 4392 6(307 8(2378 MP 146 BC307 80140-10 25A1232 8C237b BC307 80140-10 25A1232 80139-10	PLUG 2-4 P C - 0 P PP P	St			Schm 228 - 0.234 - 87  Schm 234 - 0.234 - 87  Schm 234 - 0.244 - 87  Schm 234 - 0.244 - 87  Schm 234 - 0.234 - 87				8 Pole 14 Pole 8 Pole 8 Pole 16 Pole 16 Pole 8 Pole	T.C. Sockes T.C. Sockes T.C. Sockes T.C. Sockes T.C. Sockes	
P1 P2 P3 P4 Q1 Q2 U3 Q5 Q5 Q7 Q8 Q9	54.02.0320 54.02.0320 54.02.0320 54.02.0320 50.03.0515 50.03.0456 50.03.0456 50.03.0456 50.03.0456 50.03.0455 50.03.0455 50.03.0455 50.03.0455 50.03.0455	MPF 4392 6C307 8C2378 MP 146 BC307 80140-10 25A1232 8C2378 BC307 80140-10 25A1232	PLUG 24 9 0.8 PLUG 24 9 0.8 PLUG 24 9 0.8 PLUG 24 9 0.8 P-CH FT PAP PAP PAP DC5476+ BC5508 PAP PAP PAP PAP PAP PAP PAP PAP PAP PA	St			Schola 254, 0-2544 of F		XI =5 XI =10 XI =10 XI = -110 XI = -110 XI = -13 XI = -13 XI = -13 XI = -10 XI = -1	P≅FP=Polyester•	s pole s pole l pole	TE Socket TE Socket TE Socket TE Socket TE Socket TE Socket	

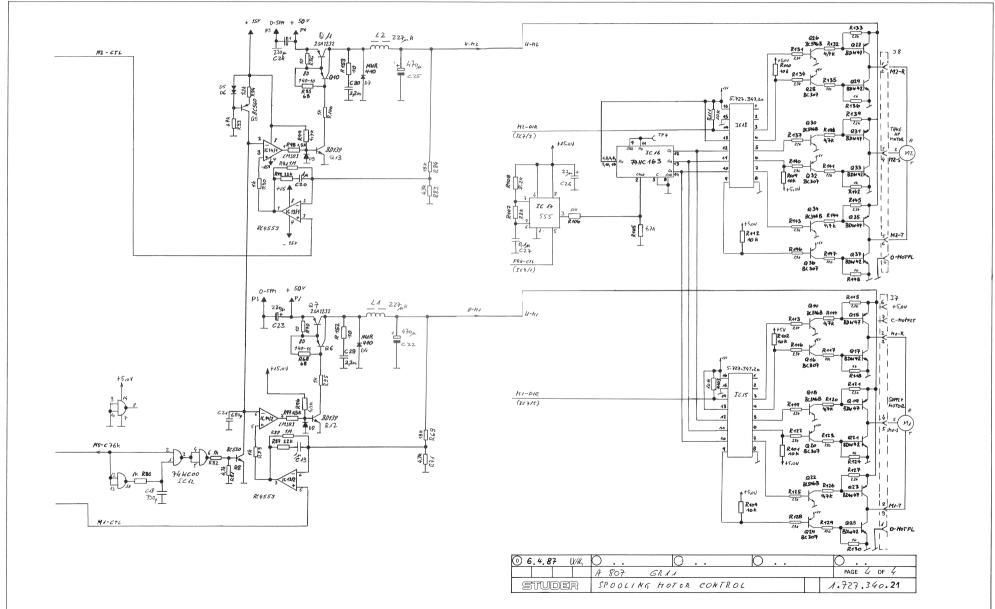
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- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12



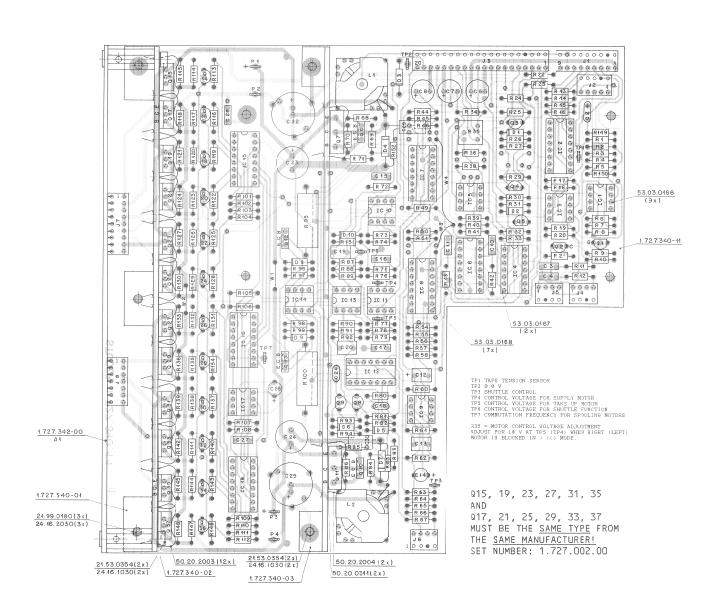


- SHUTTLE CONTROL 1.727.180.00
- TAPE TENSION ADJUST 1.727.341.00 GRP14
- SPOOLING MOTOR FILTER 1.727.342.00 GRP12





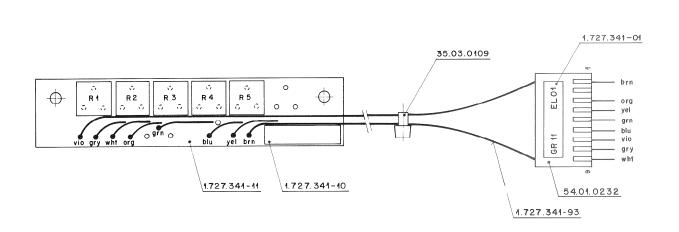






IND- POS-NO- PIRT NO- VALUE SPECIFICATIONS / SQUIVALENT MANUF-	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT NAMUF.	INC. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. FOS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
A1 1-127.342-00 Sp. Noor Filter Board St  C2 39-26-2100 10 H		R10 37.11.4102 1 kmm 2t. 0.19w M	Note 1: 915, 17, 23, 27, 31 and 35 917, 21, 25, 29, 33 and 37 9017, 21, 25, 29, 33 and 37 9017 by the tame type from the tame manufacturer.  Eleticicallytic, PETPPOlymeter, PPPPDlygroples, 31551150n , Marketal Film, PMOCETARE (EXCHERGE), SAX-Onlid Aluminium  NAMPLACHERGE: NPP-ANY, PhorPhilips, 2103160er  ONLIG 87/04/76 (01) 89/21/11  STUDER (01) 89/21/11  STUDER (01) 89/21/11 Web SP80LING MOTOR CTL. BOARD 1-727-340-21 PAGE 10
IND. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INC. POS-NA. PART MO. VALUÉ SPECIFICATIONS / EQUIVALENT MANUF.	
D5 10.0%-0125 INM-440 Dicade 50 V 31 D6 10.0%-0.0% INM-440 Dicade 50 V		R117 97-11-4331 330 Dhm 2% 0-259, NF R 117 97-11-4331 330 Dhm 2% 0-259, NF R 118 97-11-4332 330 Dhm 2% 0-259, NF R 118 97-11-4322 37-10-472 47 Toke 2% 0-259, NF R 118 97-11-4322 37-10	
ING. POS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.	ING. PGS.NG. PART NG. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	
MP  1-1727-140-11   pee   Specific force CE1-PCS   St		Tr  %-12.0320   Test Point   Apr	

# TAPE TENSION ADJUST 1.727.341.00 GRP14



IND.	P05+N0+	PART NU.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP 1	1.727.341.11	1 pce	Tape Tension Adj. PCB	St
	MP 2	1.727.341.93	1 pce	L-LST Tape Tension Adj.	St
	MP 3	54.01.0232	1 pce	CIS Case, 9 Pol	
	MP 4	1.727.341.10	1 pce	No. label	St
	Recessi	58.01.8103	10 kOhm	Potmeter PMG	
	R 2	58.01.8103	10 kOhm	Potmeter PMG	
	R 3	58.01.8103	10 k0hm	Potmeter PMG	
	R4	58.01.8103	10 kOhm	Potmeter PMG	
	R 5	58.01.8103	10 k0hm	Potmeter PMG	
	R * * * * * 6			not used	

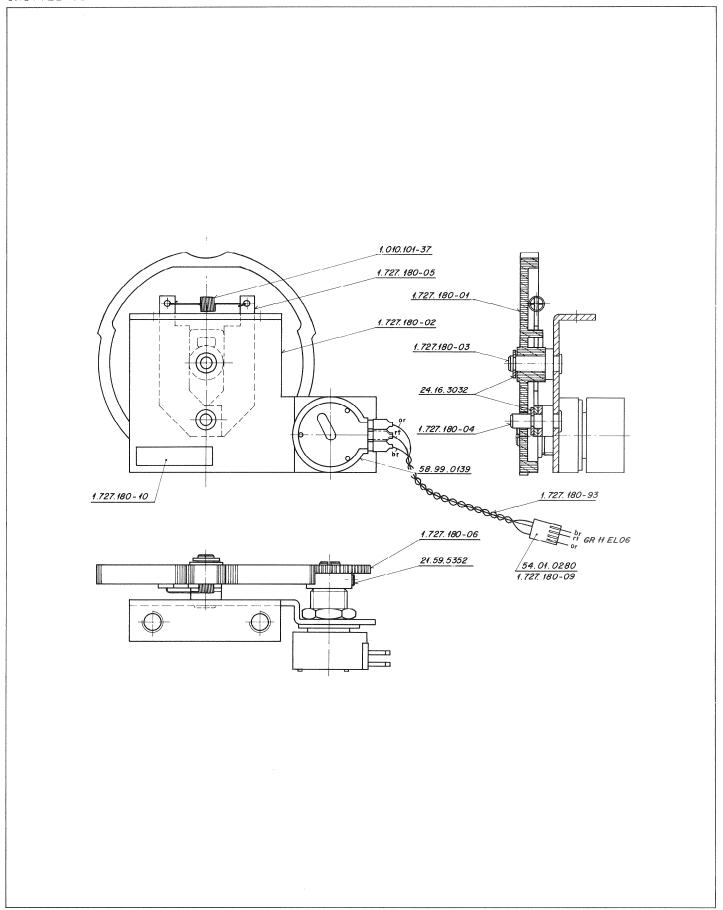
MANUFACTURER: St=Studer

ORIG 86/08/08

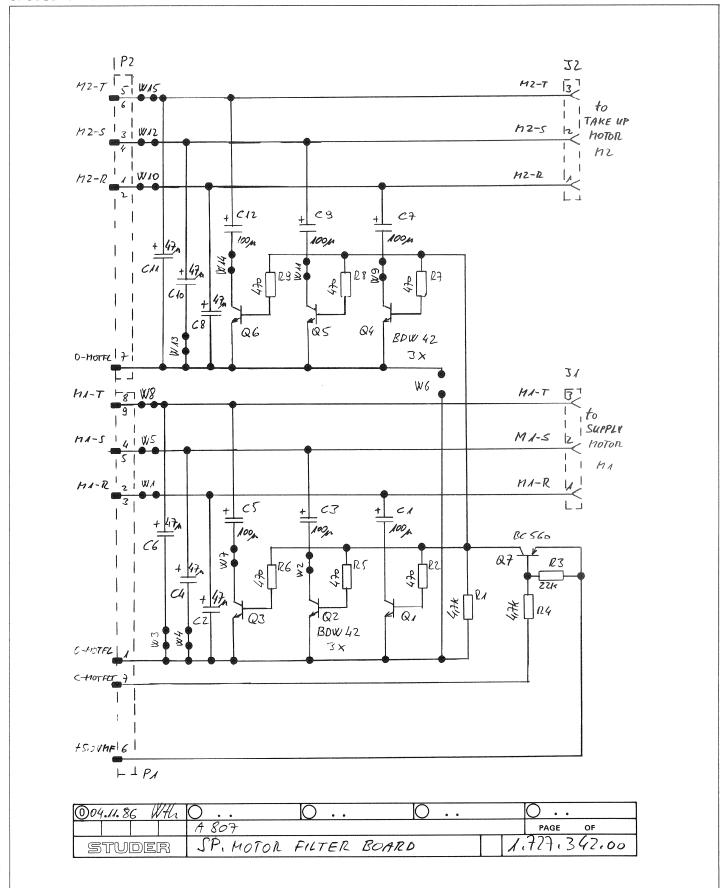
S T U D E R (00) 86/08/08 With TAPE TENSION ADJ. BOARO

1.727.341.00 PAGE 1

SHUTTLE CONTROL 1.727.180.00

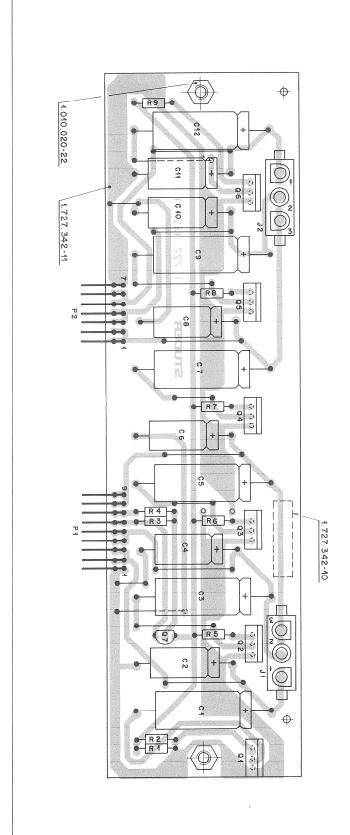


### SPOOLING MOTOR FILTER 1.727.342.00 GRP12



STUDER A807 6/38

## SPOOLING MOTOR FILTER 1.727.342.00 GRP12



I ND .	P05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C1	59.25.6101	100 uF	-20%, 63 V EL	
	C 2	59.25.6470	47 UF	-20%+ 63 V EL	
	C 3	59.25.6101	100 uF	-20% 63 V EL	
	C 4	59.25.6470	47 uF	-20%∗ 63 V EL	
	C 5	59-25-6101	100 uF	-20%+ 63 V EL	
	C 6	59.25.6470	47 uF	-20%, 63 V EL -20%, 63 V EL -20%, 63 V EL	
	C 7	59.25.6101	100 uF	-20%, 63 V EL	
	6 8	59-25-6470			
	C 9	59.25.5101	100 uF	-20%, 63 V EL -20%, 63 V EL	
	C * * * * 10	59.25.6470			
	C11	59.25.6470			
	C * * * * 12	59.25.6101	100 uF	-20%, 63 V EL	
	J1		3-Po1		AMP
	J2	54.25.0003	3-Pol	Power Connector	AMP
	MP1	1.727.342.11	1 pcs	SP+ MUTUR FILTER PCB+	St
	MP 2	1.727.342.10	1 pcs	No. label	St
	MP 3	1-010-020-22	2 pcs	Rivetnut 1=15	St
	P * * * * 1	54.01.0220	9 Pol	CIS Pin Strip	
	P = = = = 2	54.01.0223	7 Pol	CIS Pin Strip	
	01	50.03.0777	BDW 42	TU 220 NPN	
	02	50.03.0777	BDW 42	TO 220 NPN	
	4 3	50.03.0777	BDW 42	TO 220 NPN	
	U 4	50.03.0777	BDW 42	TO 220 NPN	
	45	50.03.0777	BDW 42	TO 220 NPN	
	Q 6	50.03.0777	BDW 42	TU 220 NPN	
	Q7	50.03.0515	BC307B	BC251B, BC560B PNP	
	R 1	57.11.4472	4.7 kOhm	2%, 0.25W, MF	
	R 2	57.11.4471	470 Ohm	2%, 0.25W, MF	
	R 3	57.11.4223	22 KONM	2%, 0.25W, MF	
	R 4	57.11.4472	4.7 kOhm	2%, 0.25W, MF	
	R 5	57-11-4471		2%, 0.25W, MF	
	R 6	57.11.4471	470 Ohm	2%, 0.25W, MF	
s T U	D E R (0	00) 86/08/08 Wth	SP. MOTOR	FILTER BOARD 1.727.342	.00 PAGE 1

IND.	P05 + N0 +	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R7	57.11.4471	470 Ohm	2%, 0.25W, MF	
	Raaaaa Raaaaa	57-11-4471	470 Ohm 470 Ohm	2% 0.25W MF 2% 0.25W MF	

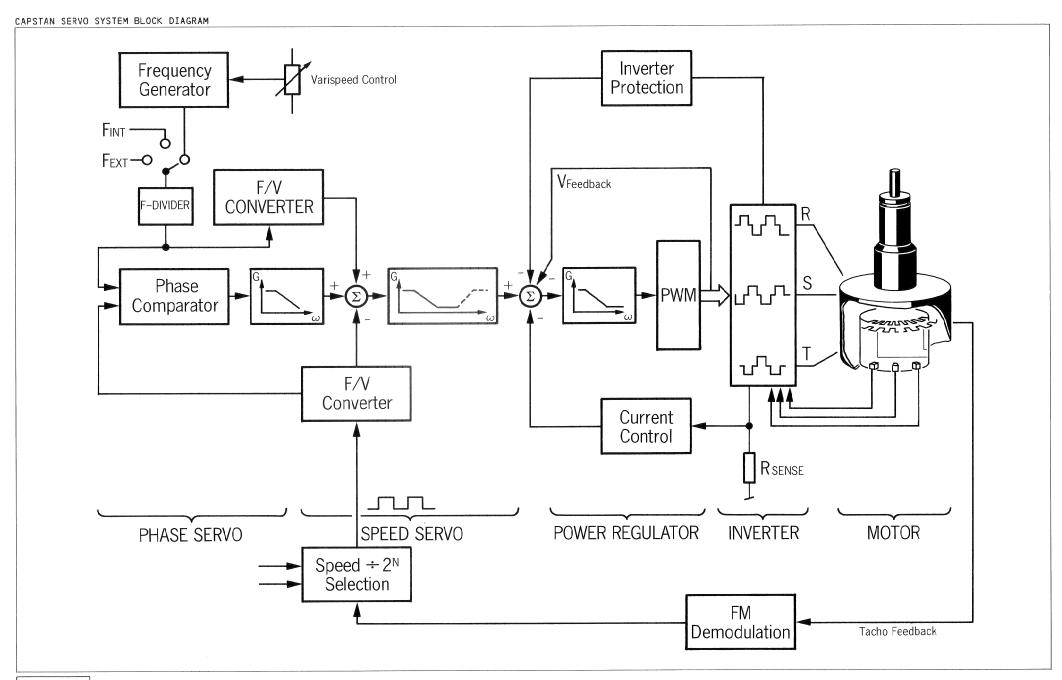
EL=Electrolytic, MF=Metal Film MANUFACTURER: AMP=AMP, St=STUDER

ORIG 86/08/08

S T U D E R (00) 86/08/08 Wth SP. MOTOR FILTER BOARD

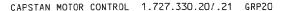
1.727.342.00 PAGE 2

A807

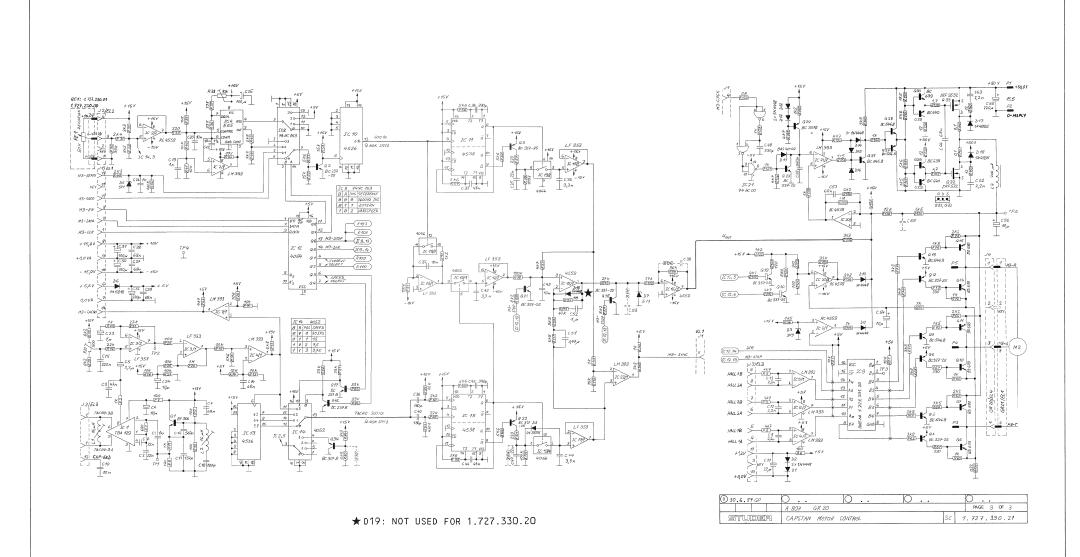


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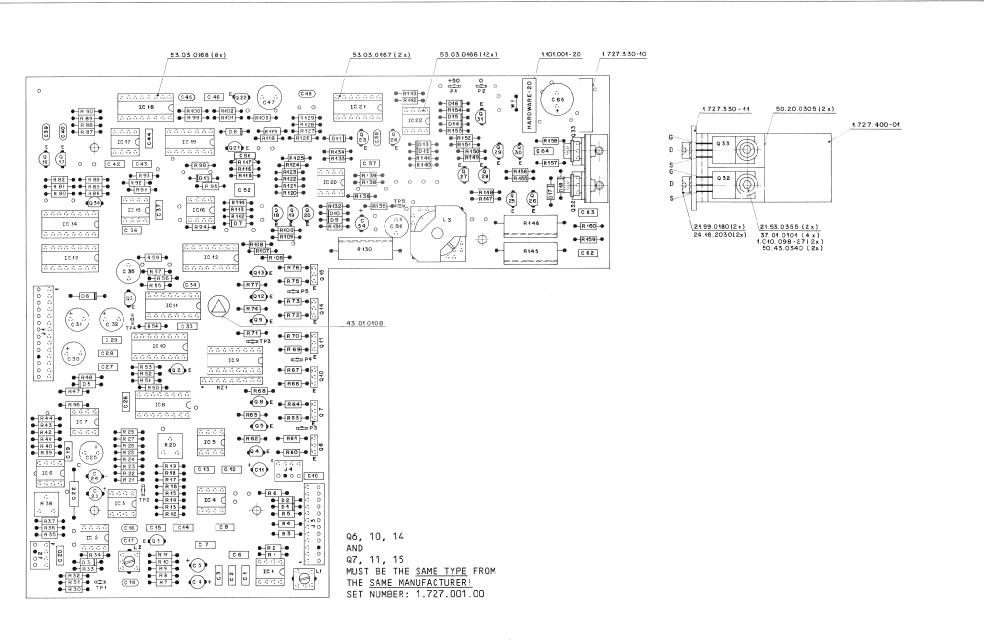
STUDER





CAPSTAN MOTOR CONTROL 1.727.330.20/.21 GRP20

A807





# CAPSTAN MOTOR CONTROL 1.727.330.20/.21 GRP20

ID •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NL
	C2 C3 C4 C5 C6	59-06-0102 59-06-0223 59-06-0473 59-22-6100 59-22-8229 59-06-0223 59-06-0683 59-06-0222	1 nF 22 nF 47 nF 10 uF 2,2 uF 22 nF 68 nF 2,2 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP -20% 35 V EL 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP		(01)	MP6 MP7 MP8 MP9 MP10 MP12 MP13	37.01.0101 50.20.0404 1.010.098.27 50.20.0305 1.727.330.10 1.727.331.01 43.01.0108 1.101.001.20	4 pcs 2 pcs 2 pcs 2 pcs 1 pce 1 pce 1 pce 1 pce	Disc spring D3-2/8-0 ° 0-3 Insulating pass through D6-0/3-5 Distance socket D3.1/7-0 ° 2-3 G0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	\$ \$
	C 11 C 12 C 13 C 14 C 15	59.06.0103 59.22.5220 59.06.0222 59.06.0222 59.06.0224 59.34.5561	10 nF 22 uF 2•2 nF 2•2 nF 68 nF 220 nF 560 pF	10% 63 V PETP  -20% 25 V EL  10% 63 V PETP  10% 63 V PETP  10% 63 V PETP  10% 63 V PETP  5% 63 V CER		, ,	P2 P3 P4 P5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole 1 Pole 1 Pole	Tab Tab Tab Tab Tab	
	C16 C17 C18 C19 C20 C22 C23	59-34-4151 59-34-4101 59-06-0102 59-06-0103 59-12-7182 59-22-8109	150 pF 100 pF 1 nF 10 nF 1•8 nF 1 uF	5½ 63 V CER 5½ 63 V CER 10¼ 63 V PETP 10¼ 63 V PETP 1½ 63 V PS -150 +-60ppm/K -20½ 50 V EL			Q1 Q2 Q4 Q5 Q6	50.03.0514 50.03.0340 50.03.0351 50.03.0351 50.03.0491 50.03.0749 50.03.0749	BF 366 BC 337-25 BC 327-25 BC 327-25 BC 546 B BD 679 BD 680	NON NPN PRP PRP PNP NPN Darlo NPN (see note Darlo PMP (see note	M 1) Ph <sub>2</sub> S
	C 24 C 25 C 26 C 27 C 28 C 29	59.22.6100 59.22.5101 59.06.0102 59.06.0683 59.06.0683 59.06.0683	10 UF 100 UF 1 NF 68 NF 68 NF 68 NF	-20% 35 V EL -20% 25 V EL 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP -20% 25 V EL			Q7 Q8 Q9 Q10 Q11 Q12 Q13	50*03*0799 50*03*0351 50*03*0749 50*03*0749 50*03*0799 50*03*0351 50*03*0491	BD 680 BC 327-25 BC 546 B BD 679 BD 680 BC 327-25 BC 546 B	Dari. PAP (see note PAP NPN Csee note PAP PAP NPN NPN See note PAP PAP NPN NPN NPN NPN NPN NPN NPN	2 L) PhyS
	C30 C31 C32 C33 C34 C35 C36 C37 C39	59-22-5101 59-22-3221 59-06-0473 59-34-5391 59-06-1223 59-06-0332 59-06-5103 59-34-4181 59-34-4181	100 uF 220 uF 47 nF 390 pF 22 nF 3-3 nF 10 nF 180 pF	25 V EL -20% 25 V EL -20% 10 V FL 10% 63 V PETP 5% 63 V PETP 5% 63 V PETP 5% 63 V PETP 5% 63 V CER			Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21	50.03.0749 50.03.0749 50.03.0436 50.03.0436 50.03.0340 50.03.0340 50.03.0340 50.03.0340 50.03.0351	BD 679 BD 680 BC 237 B BC 237 B BC 337-25 BC 337-25 BC 337-25 BC 337-25 BC 327-25	Darl. MPN (see note Darl. PAP (see note BC 547 8 BC 550 8 NPN BC 547 B BC 550 B NPN NPN NPN NPN NPN PNPN	e 1) Phes
тин	O E R (0)	1) 87/02/04 WEN		MOTOR CONTROL 1./2/.330.21	PAGE 1	SΤU	DER (	01) 87/02/04 Wth	CAPSTAN	MOTOR CONTROL 1.07270330021	PAGE
4D.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I NO •	POS + NO +	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
01)	C 42 C 44 C 45 C 46 C 47 C 48 C 51 C 52	59.06.0332 59.06.0103 59.06.0332 59.34.5391 59.06.0473 59.06.0473 59.06.5474 59.06.5474 59.06.5474 59.06.5474	3.3 nF 10 nF 3.3 nF 390 pF 47 nF 22 nF 330 pF 470 nF 1 uF 10 uF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 3% 63 V CER 3% 63 V CER 11% 92 PP 5% 63 V CER 5% 63 V CER 5% 63 V PETP 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			Q23 Q25 Q25 Q27 Q28 Q29 Q30 Q31 Q32	50.03.0340 50.03.0515 50.03.0551 50.03.0551 50.03.0492 50.03.0491 50.03.0551 50.03.0551 50.03.0551	BC 337-25 BC 307 B BC 640 BC 639 BC 556 B BC 546 B BC 640 BC 639 BC 546 B IRF 522	NPN BC 557 B BC 560 B PNP PNP PNP NPN PNP NPN NPN NPN MTP 3N10 POWEr FET N-Channel	IR•N
	C 54 C 58 C 62 C 63 C 64 C 65	59-22-8100 59-06-0683 59-34-5561 59-06-0222 59-06-0683 59-22-8221	10 uF 68 nF 560 pF 2•2 nF 2•2 nF 68 nF 220 uF	20% 63 V EL 10% 63 V EEP 10% 63 V EER 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 20% 63 V PETP			R3 R3 R3 R3	50.03.1552 50.03.0515 57.11.4681 57.11.4102 57.11.4472 57.11.4472	IRF 9532 BC 307 B 680 Ohm 1 kOhm 4.7 kOhm 4.7 kOhm 4.7 kOhm	MTP BP10 Power FET P-Channel DC 357 B BC 500 B PNP  2%, 0.25W, MF	IR+
	D1 D2 D3 D5 D6 D7	50.04.0125 50.04.0125 50.04.1101 50.04.1112 50.04.0512 50.04.0134 50.04.0125	1N4448 1N4448 3.9 V 5.1 V 1N5818 5.1 V 1N3595 DHD 1N4448	50 V 50 V 5% 0.4 W 5% 0.4 W 30 V 1N5819 Schottky 5% 0.4 W 150 V 1 rev <1 nA @ 125 V 50 V	Fc		R6 R9 R9 R11 R12 R13	57-11-4101 57-11-4121 57-11-4121 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103	100 Ohm 120 Ohm 120 Ohm 10 kOhm 10 kOhm 1 kOhm 2 kOhm 1 kOhm 2 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF	
	D10 D12 D13 D14 D15 D16 D17 D17	50.04.0125 50.04.0127 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0508 50.04.0508 50.04.0508	BAS 40-02 1N4448 1N4448 1N4448 1N4448 1N4448 1N4935 1N4935 1N4448	30 V BAT 85, BAT 42 Schottky 50 V 50 V	Sie+Ph Mot+GI Mot+GI		R15 R16 R17 R18 K19 R20 R21 R22	57-11-4103 57-11-4562 57-11-4682 57-11-4822 57-11-4822 58-01-8501 57-11-4273 57-11-4103 57-11-4102	10 kOhm 5-6 kOhm 6-8 kOhm 8-2 kOhm 8-2 kUhm 500 Ohm 27 kOhm 10 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 10% 0.5 % CERMET, lin. Trimmpote 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
τυ		1) 87/02/04 Wth		MOTOR CONTROL 1.727.330.21	PAGE 2	SΤU	R • • • • 24	57-11-4105 01) 87/02/04 Wth	1 MOhm CAPSTAN	2% 0.25% MF  MOTOR CONTROL 1.727.330.21	PAGE
ND •	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAI
	IC2 IC2 IC4 IC6 IC6 IC7 IC8 IC9	50-11-0137 50-09-0107 50-09-0101 50-05-0283 50-05-0283 50-05-0283 50-05-0283 50-17-1153 50-05-0206 50-07-0526	TBA 129 RC 4559 LF 353 N LM 393 N NE 555 N LM 393 N 74 HC 1534526	FM-ZF-AmpDiscriminator uPC 4595 Dual Op-Amp. TL 072 CP Dual Op-Amp. TL 072 CP Dual Op-Amp. Bi-JFET LM 393 P Dual Comp. LM 393 P Dual Comp. LM 393 P Dual Comp. CM 393 P Dual Comp. Capstan motor comm. Ctl. 1-727-331	Ph Ra+NEC NS+TI NS+TI Sig+NS NS+TI Sig+NS		R 25 R 26 R 27 R 28 R 30 R 31 R 32 R 32 R 34 R 35 R 35	57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4303 57.11.4332 57.11.4332 57.11.4322 57.11.4322 57.11.4323	10 kOhm 10 kOhm 10 kOhm 10 kOhm 39 kOhm 2-7 kOhm 3-3 kOhm 8-2 kOhm 1-5 kOhm 220 Ohm	2%, 0.25W, MF	
	IC 12 IC 13 IC 14 IC 15 IC 16 IC 17 IC 18 IC 19 IC 20 IC 21 IC 21	50.07.0018 50.07.0526 50.07.0024 50.09.0101 50.09.0107 50.09.0107 50.07.0066 50.09.0107 50.17.1000 50.05.0283	4094 4526 LF 353 N RC 4559 LF 353 N 4538 4066 RC 4559 74 HC 00 LM 393 N	TL 072 CP Dual Op-Amp. Bi-JFET uPC 4559 Dual Op-Amp. TL 072 CP Dual Op-Amp. DI-JFCT uPC 4559 Dual Op-Amp. LM 303 P Dual Comp.	NS+TI Ra+NEC NS+TI Ra+NEC NS+TI		R 37 R 38 R 39 R 40 R 41 R 42 R 43 R 44 R 46 R 47	57.11.313 58.01.8103 57.11.4103 57.11.4103 57.11.4103 57.11.4682 57.11.4332 57.11.4332 57.11.4372 57.11.4472 57.11.4422	13 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 30 kOhm 40 kOhm	1%, 0.25M; ME 10%, 0.5 M; CERMET, lin. Trimmpot- 2%, 0.25M; ME 2%, 0.25M; MF	
	J2 J3 J4	54.01.0293 54.01.0241 54.01.0215 54.01.0241	14 Pole 4 Pole 12 Pole 4 Pole	CIS socket strip CIS socket strip CIS socket strip CIS socket strip	AMP AMP AMP AMP		R 50 R 51 R 52 R 53 R 54 R 55	57.11.4104 57.11.4562 57.11.4153 57.11.4153 57.11.4562 57.11.4562	100 kOhm 5.6 kOhm 15 kOhm 15 kOhm 5.6 kOhm 5.6 kOhm	Z%, 0.25%, MF Z%, 0.25%, MF Z%, 0.25%, MF Z%, 0.25%, MF Z%, 0.25%, MF Z%, 0.25%, MF	
	MP2	1.022.222.00 1.022.222.00 1.022.251.00 1.727.330.11 1.727.400.01	16 uH 16 uH 196 uH 1 pce 1 pce	HF-Coil HF-Coil Filter Coil PC Board Heatsink	St St St St		R 56 R 57 R 59 R 60 R 61	57.11.4262 57.11.4221 57.11.3104 57.11.4102 57.11.4331 57.11.4392	5.6 kOhm 220 Ohm 100 kOhm 1 kOhm 330 Ohm 3-9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	MP3 MP4 MP5	21.99.0180 21.53.0355 24.16.2030 1) 87/02/04 Wth	2 pcs 2 pcs 2 pcs	M3 ÷ 5 Cross recessed oval head so M3 ÷ 8 Hexagon socket head cap scr Serrat lock washer D3.2/o.0 MDTOR CONTROL 1.727.330.21	ew	5.7.11	R63 R64 R65	57.11.4222 57.11.4152 57.11.4332 01) 87/02/04 Wth	2.2 kOhm 1.5 kOhm 3.3 kOhm	2%, 0=25H, MF 2%, 0=25H, MF 2%, 0=25H, MF MOTOR CONTROL 1-727-330-21	DACE



# CAPSTAN MOTOR CONTROL 1.727.330.20/.21 GRP20

POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	
R66	57-11-4102	1 kOhm	2%, 0.25W, MF			XIC17	53.03.0166	8 Pole	IC socket	
R67	57.11.4331	330 Ohm	2%, 0.25W, MF			XIC 18	53.03.0168	16 Pole	IC socket	
R68	57.11.4392	3.9 k0hm	2%, 0.25W, MF			XIC 19	53.03.0167	14 Pole	IC socket	
R****69	57-11-4222	2.2 kOhm	2%, 0.25W, MF			XIC20	53.03.0166	8 Pole	IC socket	
R70	57.11.4152	1.5 kOhm	2%, 0.25W, MF			XIC 21 XIC 22	53.03.0167 53.03.0166	14 Pole 8 Pole	IC socket IC socket	
R71	57.11.4332	3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			X10.022	33.03.0100	8 role	ic socket	
R72 R73	57.11.4102 57.11.4331	1 k0hm 330 0hm	2%, 0.25W, MF							
R 74	57.11.4392	3.9 kOhm	2%, 0.25W, MF							
R75	57.11.4222	2.2 kOhm	2%, 0.25W, MF							
R 76	57.11.4152	1.5 kOhm	2% 0.25W MF							
R77	57.11.4332	3.3 k0hm	2%, 0.25W, MF							
R80	57.11.4682	6.8 kOhm	2%, 0.25W, MF							
R81	57.11.4333	33 k0hm	2%, 0.25W, MF							
R * * * * 82	57.11.4333	33 k0hm	2%, 0.25W, MF							
R84	57.11.4332	3.3 kOhm	2%, 0.25W, MF							
R85	57-11-4333	33 kOhm	2%, 0-25W, MF							
R * * * * 86	57.11.4333	33 kOhm 470 kOhm	2% 0.25W MF						10 /	
R87 R88	57.11.4474 57.11.4223	22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		(01)	04.02.1987	Better wow and f	inter Asin	es at 15 ips.	
R 89	57-11-4223	22 kOhm	2% 0.25W MF		Noto	l = For ove	allant waw and t	flutter valu	es at 3.75 ips the NPN -	
R90	57.11.4222	2.2 kOhm	2% 0.25W MF		Noce .				hould be from the same	
R91	57-11-4104	100 k0hm	2%, 0.25W, MF			manufac		3113131313	NOCTO DO TTOM CITO DOMO	
R 92	57.11.4122	1.2 kOhm	2%, 0.25W, MF							
R 93	57-11-4472	4 • 7 kOhm	2%, 0.25W, MF							
R 94	57-11-4563	56 kOhm	2%, 0.25W, MF		MATER	IALS: CER	= Ceranic,	EL = Elect	rolytic, MF = Metalfilm	
R • • • • 95	57.11.4105	1 MOhm	2%, 0.25W, MF			PETP	= Polyesterfoil	PS = Polys	tyrol, PP = Polypropylen	
R98	57.11.4104	100 kOhm	2%, 0.25W, MF							
R • • • • 99	57.11.4562	5.6 kOhm	2%, 0.25W, MF		MANUF		P = AMP Incorpor	rated	Ph = Philips	
R100	57.11.4562	5.6 kOhm	2%, 0.25W, MF				= Fairchild		Ra = Raytheon	
R101	57-11-4221	220 Ohm	2%. 0.25W. MF				= General Inst		SGS = SGS/Ates	
R102	57.11.4562 57.11.3104	5.6 kOhm 100 kOhm	2%, 0.25W, MF				= Internationa t = Motorola	i kectifier	Sie = Siemens Sia = Sianetics	
R = = = 103 R = = = 106	57-11-3104	100 KUNM 1 kOhm	1%, 0.25W, MF 2%, 0.25W, MF				t = Motorola C = Nippon Elect		Sig = Signetics St - Studer	
R 107	57-11-4102	8 • 2 kOhm	2% 0 • 25W • MF				= Nippon Elect = National Ser		TI = Texas Instruments	
R • • • 101	57.11.4822	8.2 kOhm	2%, 0.25W, MF			N S	- Mactoliat 261	ar Conductor	IV - LEVOS TILSEL OBELICZ	
R109	57.11.4472	4.7 kOnm	2%, 0.25W, MF		OR 1G	87/06/30	(01) 87/02/04			

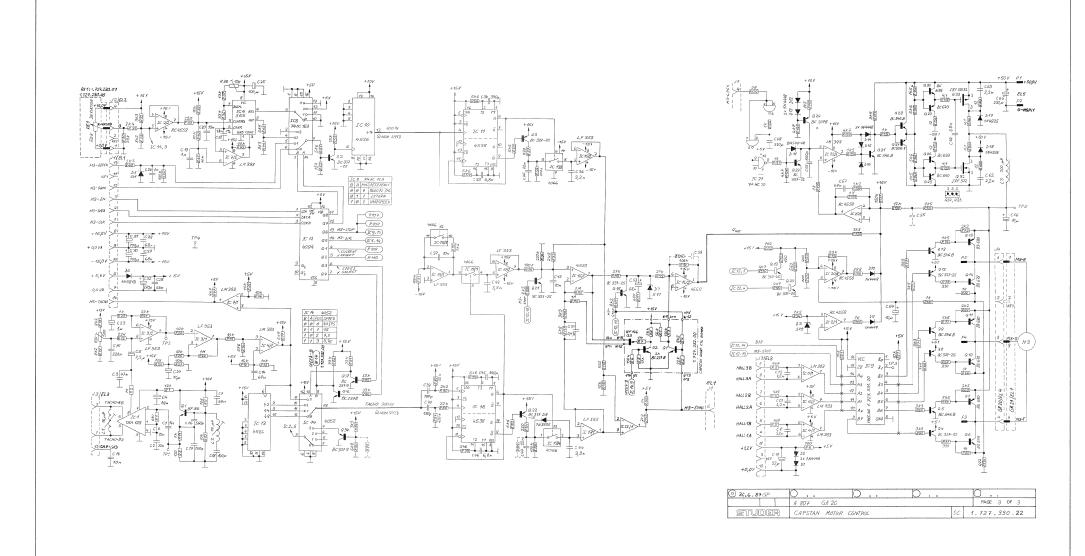
I ND .	POS-NO-	PART NO.	VALUE	SPEC	IFICATIONS / EQU	JI VAL ENT	MA NU	UF.
	R110	57.11.4472	4.7 kOhm	23.	0-25W- MF			
	R 112	57-11-4273	27 kOhm	2%,	0.25W, MF			
	R 113	57.11.4273	27 k0hm	2 % •	0.25W, MF			
	Reee 115	57-11-4473	47 kOhm		0.25W, MF			
	Reee 116	57-11-4332	3.3 k0hm	2%,	0.25W, MF			
	R 117	57-11-4682	6.8 kOhm	2%,	0.25W, MF			
	R118	57.11.4102	l kOhm		0.25W, MF			
	R • • • 119	57-11-4103	10 kOhm	2%,	0.25W, MF			
	R120	57.11.4561	560 Ohm	2%.	0.25W, MF			
	R • • • 121	57.11.4121	120 Ohm	2%,	0.25W, MF			
	R • • • 122	57.11.4122	1.2 kOhm		0.25W, MF			
	R123	57.11.3911	910 Ohm		0.25W, MF			
	R124	57.11.4333	33 k0hm		0.25W. MF			
	R • • • 125	57-11-4101	100 Ohm		0.25W, MF			
	R126	57-11-4472	4.7 kOhm		0.25W. MF			
	R127	57.11.4102	1 kOhm		0.25W, MF			
	R • • • 128	57-11-4102	1 kOhm	22,	0.25W, MF			
	Rese129	57.11.4000	0 Ohm					
	R130	57.56.5228	0.22 Dhm		4.0 W, Wire			
	R • • • 131	57.11.4102	1 kOhm		0.25W, MF			
	R • • • 132	57.11.4332	3.3 kOhm		0.25W. MF			
	R133	57.11.4105	1 MOhm		0.25W, MF			
	R • • • 134	57.11.4222	2.2 kOhm		0.25W, MF			
	R • • • 135	57.11.4152	1.5 kOhm		0.25W+ MF			
	R • • • 136	57.11.4332	3.3 kOhm		0.25W, MF			
	R138	57-11-4123	12 kOhm		0.25W. MF			
	R • • • 139	57.11.4102	1 kOhm		0.25W, MF			
	R140	57.11.4122	1.2 kOhm		0.25W. MF			
	R • • • 141	57.11.4472	4.7 kOhm		0.25W, MF			
	R • • • 142	57.11.4102	1 kOhm		0.25W, MF			
	R143	57.11.4332	3.3 kOhm		0.25W. MF			
	R 145	57.56.5108	0+1 Ohm		4-0 W. Wire			
	R146	57.56.5108	0 • 1 Ohm		4.0 W. Wire			
	R147	57.11.4152	1.5 kOhm		0.25W. MF			
	R • • • 140	57.11.4562	5-6 kOhm		0.25W, MF			
	R • • • 149	57.11.4562	5.6 kOhm		0.25W, MF			
	R150	57.11.4152	1.5 kOhm	2%,	0.25W, MF			
τυ	D E R (01	) 87/02/04 Wth	CAPSTAN	MOTOR	CONTROL	1.727.330.21	PAGE	

IND.	POS • NO •	PART NO.	v	ALUE	SPECIFICATIONS / EQUIV	AL ENT	MAN	UF
	R 151	57.11.4392	3.9	kOhm	2%, 0.25W, MF			
	R152	57-11-4102	1	kOhm	2%, 0.25W, MF			
	Reee 153	57.11.4472	4.7	k0hm	2%, 0.25W, MF			
	R154	57.11.4152	1.5	kOhm	2%, 0.25W, MF			
	R155	57-11-4120	1.2	Ohm	2% 0.25W MF			
	R156	57-11-4120	12	Ohm	2%, 0.25W, MF			
	R • • • 157	57.11.4479	4.7	Ohm	2%, 0.25W, MF			
	R 158	57-11-4479	4-7	Ohm	2%, 0.25W, MF			
	R159	57-11-4120	12	Ohm	2%, 0.25W, MF			
	R160	57.11.4120	12	Ohm	2%, 0.25W, MF			
	RZ•••1	57.88.4103	8#10	k0hm	5%, Single Line			
	TP1	54.02.0320		Pole	Tab			
	TP • • • • 2	54.02.0320		Pole	Tab			
	TP • • • • 3	54.02.0320		Pole	Tab			
	TP • • • • 4	54.02.0320		Pole	T ab			
	TP5	54.02.0320	1	Pole	Tab			
	W1	1.010.321.64			Wire Bridge			
	X [ C 1	53.03.0166		Pole	IC socket			
	XIC 2	53.03.0166		Pole	IC socket			
	XIC 3	53.03.0166	8	Pole	IC socket			
	XIC4	53.03.0166	8	Pole	IC socket			
	XIC 5	53.03.0166	8	Pole	IC socket			
	XIC 6	53.03.0166	8	Pole	IC socket			
	XIC7	53.03.0166	8	Pole	IC socket			
	XIC 8	53.03.0168		Pole	IC socket			
	XIC 9	53.03.0168		Pole	IC socket			
	XIC 10	53.03.0168		Połe	IC socket			
	XIC 11	53.03.0168	16	Pole	IC socket			
	XIC12	53.03.0168	16	Pole	IC socket			
	XIC13	53.03.0168		Pole	IC socket			
	XIC 14	53.03.0168	16	Pole	IC socket			
	XIC 15	53.03.0166		Pole	IC socket			
	XIC16	53.03.0166	8	Pole	IC socket			

CAPSTAN MOTOR CONTROL 1.727.330.22 GRP20 - CAPSTAN START CONTROL 1.727.332.00

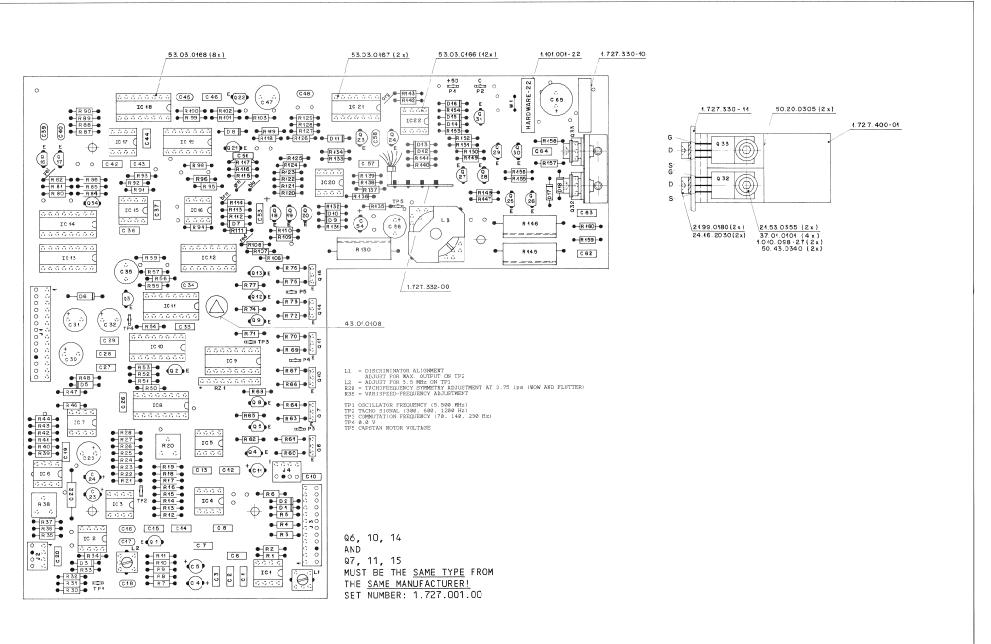
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CAPSTAN MOTOR CONTROL 1.727.330.22 GRP20





IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.
	1.727.332.00		Capstan Start Ctl. Board	St		MP7	37-01-0101 50-20-0404 1-010-098-27	4 pcs 2 pcs	Disc spring 03-2/8-0 \(\phi\) 0.3 Insulating pass through 06-0/3-5 Distance socket 03-1/7-0 \(\phi\) 2.3 St
C • • • • • 1 C • • • • • 2 C • • • • 3	59.06.0102 59.06.0223 59.06.0473	1 nF 22 nF 47 nF	10% 63 V PETP 10% 63 V PETP			MP8 MP9 MP10	50.20.0305 1.727.330.10	2 pcs 2 pcs 1 pce	Greased insulation for TO 220 No. label St
C ****** C ****** C *******	59.22.6100 59.22.8229 59.06.0223	10 uF 2,2 uF 22 nF	-20% 35 V EL -20% 50 V EL 10% 63 V PETP			MP11 MP12 MP13	1.727.331.01 43.01.0108 1.101.001.22	l pce l pce l pce	No∍ label 5 ± 17 ESE label Hardware label -22 St
C • • • • • 8 C • • • • 10	59.06.0683 59.06.0222 59.06.0103	68 nF 2.2 nF 10 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			P2	54.02.0320 54.02.0320	l Pole 1 Pole	Tab Tab
C • • • • 11 C • • • • 12 C • • • • 13	59.22.5220 59.06.0222 59.06.0222	22 uF 2.2 nF 2.2 nF	-20% 25 V EL 10% 63 V PETP 10% 63 V PETP			P • • • • • 4 P • • • • • 5	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab
C14 C15 C16	59.06.0683 59.06.0224 59.34.5561	68 nF 220 nF 560 pF	10% 63 V PETP 10% 63 V PETP 5% 63 V CER			Q • • • • • 1 Q • • • • 2	50.03.0514 50.03.0340	BF 366 BC 337-25	NPN Mot
C 17 C 18 C 19	59.34.4151 59.34.4101 59.06.0102	150 pF 100 pF 1 nF	5% 63 V CER 5% 63 V CER 10% 63 V PETP			Q3 Q4 Q5	50.03.0351 50.03.0351 50.03.0491	BC 327-25 BC 327-25 BC 546 B	PNP PNP NPN
C • • • • 20 C • • • • 22 C • • • • 23	59.06.0103 59.12.7182 59.22.8109	10 nF 1.8 nF 1 uF	10% 63 V PETP 1% 63 V PS -150 *-60ppm/K -20% 50 V EL			Q6 Q7 Q8	50.03.0749 50.03.0799 50.03.0351	BD 679 BD 680 BC 327-25	Darl. NPN (see note 1) Ph.SGS Darl. PNP (see note 1) Ph.SGS PNP
C **** 24 C **** 25 C **** 26	59.22.6100 59.22.5101 59.06.0102	10 uF 100 uF 1 nF	-20% 35 V EL -20% 25 V EL 10% 63 V PETP			Q9 Q10 Q11	50.03.0491 50.03.0749 50.03.0799	BC 546 B BD 679 BD 680	NPN Darl. NPN (see note 1) Ph·SGS Darl. PNP (see note 1) Ph·SGS
C • • • • 27 C • • • • 28	59.06.0683 59.06.0683	68 nF 68 nF	10% 63 V PETP 10% 63 V PETP			Q12 Q13	50.03.0351 50.03.0491	BC 327-25 BC 546 B BD 679	PNP NPN Darl. NPN (see note 1) PhySGS
C • • • • 29 C • • • • 30 C • • • • 31	59.06.0683 59.22.5101 59.22.5101	68 nF 100 uF 100 uF	-20% 25 V EL -20% 25 V EL			Q15 Q16	50.03.0749 50.03.0799 50.03.0436	BD 680 BC 237 B	Darl. PNP (see note 1) Ph.SGS BC 547 B BC 550 B NPN
C • • • • 32 C • • • 33 C • • • 34	59.22.3221 59.06.5682 59.34.5391	220 uF 6.8 nF 390 pF	-20% 10 V EL 5% 63 V PETP 5% 63 V CER			Q18 Q19	50.03.0436 50.03.0340 50.03.0340	BC 237 B BC 337-25 BC 337-25	BC 547 B BC 550 B NPN NPN NPN
C • • • • 35 C • • • • 36 C • • • • 37	59.05.1223 59.06.0332 59.06.5103	22 nF 3.3 nF 10 nF	1% 63 V PP 10% 63 V PETP 5% 63 V PETP			Q20 Q21 Q22	50.03.0340 50.03.0340 50.03.0351	BC 337-25 BC 337-25 BC 327-25	NPN NPN PNP
STUDER (D			MOTOR CONTROL 1.727.330.22	PAGE 1	s T u	DER (	00) 87/06/30 Wth	CAPSTAN	MOTOR CONTROL 1.727.330.22 PAGE 4
IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS-NO-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.
C • • • • 39 C • • • • 40 C • • • • 42	59.34.4181 59.34.4181 59.06.0332	180 pF 180 pF 3•3 nF	5% 63 V CER 5% 63 V CER 10% 63 V PETP			Q23 Q24 Q25	50.03.0340 50.03.0515 50.03.0626	BC 337-25 BC 307 B BC 640	NPN BC 557 B BC 560 B PNP PNP
C • • • • 43 C • • • • 44	59.06.0103 59.06.0332	10 nF 3.3 nF 390 pF	10% 63 V PETP 10% 63 V PETP 5% 63 V CER			Q26 Q27 Q28	50.03.0551 50.03.0492 50.03.0491	BC 639 BC 556 B BC 546 B	NPN PNP NPN
C 45 C 46 C 47	59.34.5391 59.06.5682 59.05.1223	6.8 nF 22 nF	5% 63 V PETP 1% 63 V PP			Q29 Q30	50.03.0626 50.03.0551	BC 640 BC 639	PN P NPN
C 48 C 51 C 53	59.34.4331 59.06.5474 59.26.0680	330 pF 470 nF 68 uF	5% 63 V CER 5% 63 V PETP 20% - 6.3 V SAL	Ph		Q31 Q32 Q33	50.03.0491 50.03.1502 50.03.1552	BC 546 B IRF 522 IRF 9532	NPN MTP BNIO Power FET N-Channel IR•Mot MTP BPIO Power FET P-Channel IR•Mot
C****56 C****57	59.22.6100 59.22.8100 59.06.0683	10 uF 10 uF 68 nF	-20% 35 V EL -20% 63 V EL 10% 63 V PETP			R 1	50-03-0515 57-11-4681	BC 307 B 680 Ohm	BC 557 B RC 560 B PNP 2%, 0.25H, MF
C • • • • 58 C • • • 62	59.34.5561 59.06.0222 59.06.0222	560 pF 2.2 nF 2.2 nF	5% 63 V CER 10% 63 V PETP 10% 63 V PETP			R • • • • • 2 R • • • • • 3 R • • • • • 4	57.11.4102 57.11.4472 57.11.4472	1 kOhm 4.7 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
C • • • • 63 C • • • 64 C • • • 65	59.06.0683 59.22.8221	68 nF 220 uF	10% 63 V PETP -20% 63 V EL			R5 R6 R7	57-11-4472 57-11-4101 57-11-4121	4.7 kOhm 100 Ohm 120 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
D1 D2	50.04.0125 50.04.0125	1N4448 1N4448	50 V 50 V			R • • • • • 8 R • • • • • 9 R • • • • 10	57-11-4121 57-11-4103 57-11-4103	120 Ohm 10 kOhm 10 kOhm	2% 0a25Hv HE 2% 0a25Hv HE 2% 0a25Hv MF 2% 0a25Hv MF
D5 D6	50-04-1101 50-04-1112 50-04-0512	3.9 V 5.1 V 1N5818	5% 0.4 W 5% 0.4 W 30 V 1N5819 Schottky			R • • • • 11 R • • • • 12	57.11.410Z 57.11.4223	1 kOhm 22 kOhm	2%, 0°25W, ME 2%, 0°25W, ME
D7 D8 D9	50.04.1112 50.04.0134 50.04.0125	5.1 V 1N3595 DHD 1N4448	5% 0.4 W 150 V I rev <1 nA @ 125 V 50 V	Fc		R13 R14 R15	57.11.4103 57.11.4103 57.11.4103	10 k0hm 10 k0hm 10 k0hm	2%; 0.25M; MF 2%; 0.25M; MF 2%; 0.25M; MF
010 D11 012	50.04.0125 50.04.0127 50.04.0125	1N4448 BAS 40-02 1N4448	50 V 30 V BAT 85, BAT 42 Schottky 50 V	Sie,Ph		R 16 R 17 R 18	57.11.4562 57.11.4682 57.11.4822	5.6 kOhm 6.8 kOhm 8.2 kOhm	2%, 0=25M, MF 2%, 0=25M, MF 2%, 0=25M, MF
0 · · · · 1 3 0 · · · · 1 4 0 · · · · 1 5	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V 50 V 50 V			R20 R21	57.11.4822 58.01.8501 57.11.4273	8.2 kOhm 500 Ohm 27 kOhm	2% 0.25%, MF 10% 0.5 Wy CERMET; lin. Trimmpot. 2%, 0.25%, MF
D17	50.04.0125 50.04.0508	1 N4448 1 N4935	50 V 200 V 1N4936 RG1D 200 V 1N4936 RG1D	Mot+GI Mot+GI		R 22 R 23 R 24	57-11-4103 57-11-4102 57-11-4105	10 kOhm 1 kOhm 1 MOhm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF
018 STUDER (0	50.04.0508 (0) 87/06/30 Wth	1N4935 CAPSTAN	MOTOR CONTROL 1.727.330.22		STU		00) 87/06/30 Wth		MOTOR CONTROL 1.727.330.22 PAGE 5
IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.
IC2 IC3	50.11.0137 50.09.0107 50.09.0101	TBA 129 RC 4559 LF 353 N	FM-ZF-Amp.,Discriminator uPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	Ph Ra•NEC NS•TI		R • • • • 25 R • • • • 26 R • • • • 27	57.11.4103 57.11.4103 57.11.4103	10 kOhm 10 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
IC5	50.05.0283 50.05.0283	LM 393 N LM 393 N NE 555 N	LM 393 P Dual Comp.  LM 393 P Dual Comp.  LM 555 CN	NS+TI NS+TI Siq+NS		R • • • • 28 R • • • • 30 R • • • • 31	57-11-4103 57-11-4393 57-11-3242	10 kOhm 39 kOhm 2•4 kOhm	2%, 0~25W, MF 2%, 0~25W, MF 1%, 0~25W, MF
IC7 IC8	50.05.0158 50.05.0283 50.17.1153	LM 393 N 74 HC 153	LM 393 P Dual Comp	NS+TI		R • • • • 32 R • • • • 33	57.11.4332 57.11.4322 57.11.4152	3.3 kOhm 8.2 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
IC9 IC10 IC11	50.05.0206 50.07.0526 50.07.0530	4526	Capstan motor comm. Ctl. 1.727.33	1•20 St		R 34 R 35 R 36	57.11.4221 57.11.4333	220 Ohm 33 k∩hm	2%, 0.25W, MF 2%, 0.25W, MF
IC12 IC13 IC14	50.07.0018 50.07.0526 50.07.0024	••4094•• ••4526••				R 37 R 38 R 39	57.11.3133 58.01.8103 57.11.4103	13 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 10%, 0.5 W, CERMET, line Trimmpote 2%, 0.25W, MF
IC15 IC16	50.09.0101 50.09.0107 50.09.0101	LF 353 N RC 4559 LF 353 N	TL 072 CP Oual Op.Amp. Bi-JFET UPC 4559 Oual Op.Amp. IL 072 CP Oual Op.Amp. Bi-JFET	NS+TI Ra+NEC NS+TI		R • • • • 40 R • • • • 41 R • • • • 42	57.11.4103 57.11.4103 57.11.4103	10 kOhm 10 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
IC17 IC18 IC19	50.07.0538 50.07.0066	4538 4066 RC 4559	uPC 4559 Oual Op-Amp-	Ra•NEC		R 44 R 46	57.11.4682 57.11.4332 57.11.4103	6.8 kOhm 3.3 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
IC 20 IC 21 IC 22	50.09.0107 50.17.1000 50.05.0283	74 HC 00 LM 393 N	LM 393 P Dual Comp.	NS+TI		R • • • • 47 R • • • • 48	57.11.4472 57.11.4222	4.7 k0hm 2.2 k0hm 100 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
J1 J2	54.01.0293 54.01.0241	14 Pole 4 Pole	CIS socket strip CIS socket strip	AMP AMP		R50 R51 R52	57.11.4104 57.11.4562 57.11.4153	5.6 kOhm 15 kOhm	2%, 0.25W, MF 2%, 0.25W, MF
J3 J4	54.01.0215 54.01.0241	12 Pole 4 Pole	CIS socket strip CIS socket strip	AMP AMP		R 53 R 54 R 55	57.11.4153 57.11.4562 57.11.4562	15 kOhm 5.6 kOhm 5.6 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
L1 L2 L3	1.022.222.00 1.022.222.00 1.022.251.00	16 uH 16 uH 196 uH	HF-Coil HF-Coil Filter Coil	St St St		R56 R57 R59	57.11.4562 57.11.4221 57.11.3104	5•6 k0hm 220 0hm 100 k0hm	2%, 0-25W, MF 2%, 0-25W, MF 1%, 0-25W, MF
MP1	1.727.330.11	1 pce	PC Board Meatsink	St St		R60 R61 R62	57.11.4102 57.11.4331 57.11.4392	1 kOhm 330 Ohm 3-9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
MP2 MP3 MP4	21.99.0180 21.53.0355	1 pce 2 pcs 2 pcs	M3 ÷ 5 Cross recessed oval head so M3 ÷ 8 Hexagon socket head cap scr	rew		R 63 R 64	57.11.4222 57.11.4152 57.11.4332	2.2 kOhm 1.5 kOhm 3.3 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
MP5 STUDER (0	24.16.2030 00) 87/06/30 WE	2 pcs h CAPSTAN	Serrat lock washer 03-2/6-0  MOTOR CONTROL 1-727-330-22	PAGE 3	STU	R••••65 J D E R (	57-11-4332 00) 87/06/30 Wth		24, 0-25%, MF M MOTOR CONTROL 1-727-330-22 PAGE 6
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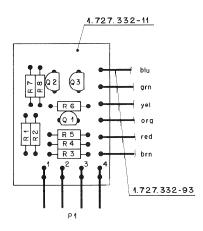


IND	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EG		MANUF.		POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQ	UIVALENT	MANUF.
	R66	57.11.4102	1 kOhm	2%+ 0.25W+ MF				XIC14	53.03.0168	16 Pole	IC socket		
	R * * * * 67	57.11.4331	330 Ohm	2%, 0.25W, MF				XIC 15	53.03.0166	8 Pole	IC socket		
	R • • • • 68	57 • 11 • 4392	3 • 9 kOhm	2%+ 0+25W+ MF				XIC16	53.03.0166	6 Pole	IC socket IC socket		
	R 69	57•11•4222 57•11•4152	2.2 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF				XIC17 XIC18	53.03.0166 53.03.0168	8 Pole 16 Pole	IC socket		
	R • • • • 70 R • • • • 71	57+11+4152 57+11+4332	3.3 kOhm	2%, 0.25W, MF				XIC++10	53.03.0167	15 Pole	IC SOCKET		
	R 72	57.11.4102	1 kOhm	2% 0.25W, MF				XIC20	53.03.0166	8 Pole	IC socket		
	R73	57.11.4331	330 Ohm	2%, 0.25W, MF				XIC 21	53.03.0167	14 Pole	IC socket		
	R 74	57.11.4392	3.9 k0hm	2%, 0.25W, MF				XIC 22	53.03.0166	8 Pole	IC socket		
	R 75	57.11.4222	2.2 kOhm	2%, 0.25W, MF									
	R76	57-11-4152	1.5 kOhm	2%, 0.25W, MF									
	R * * * * 77	57-11-4332	3.3 kOhm	2%, 0.25W, MF									
	R80 R81	57.11.4682 57.11.4333	6∙8 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R * * * * 82	57.11.4333	33 kOhm	2%, 0.25W, MF									
	R 84	57-11-4332	3.3 kOhm	2%, 0.25W, MF									
	R 85	57-11-4333	33 k0hm	2%, 0.25W, MF									
	R • • • 86	57.11.4333	33 kOhm	2%, 0.25W, MF									
	R • • • • 87	57.11.4474	470 k0hm	2%, 0.25W, MF									
	R****88	57•11•4223 57•11•4223	22 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					-11+ and 4	lukkos uslu	es at 3.75 ips the NP	M	
	R****89 R****90	57.11.4222	2.2 kOhm	2%, 0.25W, MF			Note				hould be from the sam		
	R91	57.11.4104	100 kOhm	2%, 0.25W, MF				manufac		unstators 3.	nourd be from the som	-	
	R92	57-11-4122	1.2 k0hm	2%, 0.25W, MF				morrar ac					
	R93	57.11.4222	2+2 k0hm	2%, 0.25W, MF									
	R • • • 94	57.11.4104	100 kDhm	2%, 0.25W, MF			MATER	IALS: CER			rolytic: MF = Metal		
	R • • • • 95	57-11-4105	1 MOhm	2%, 0.25W, MF				PETP	= Polyesterfoil;	PS = Polys	tyrol, PP = Polyp	ropylen	
	R96	57.11.4224 57.11.4104	220 kOhm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF					P = AMP Incorpor	*****	Ph = Philips		
	R98 R99	57.11.4562	5.6 kOhm	2%, 0.25W, MF			MANUF		= Fairchild	ateo	Ra = Raytheon		
	R • • • 100	57.11.4562	5.6 kOhm	2%, 0.25W, MF					= General Inst	ruments	SGS = SGS/Ates		
	R101	57.11.4221	220 Ohm	2%, 0.25W, MF					= Internationa				
	R • • • 102	57-11-4562	5.6 kOhm	2%, 0.25W, MF				Mo	t = Motorola		Sig = Signetics		
	R103	57.11.3104	100 k0hm	1%, 0.25W, MF					C = Nippon Elect		St = Studer		
	R••• 106	57-11-4102	1 kOhm	2%, 0.25W, MF				NS	= National Sen	iconductor	TI = Texas Instru	ments	
	R • • • 107	57-11-4822	8.2 kOhm	2%, 0.25W, MF									
	R108	57.11.4822	8-2 kOhm	2%, 0.25W, MF			ORIG	87/06/30					
ST	UDER (OC	) 87/06/30 Wth	CAPSTAN	MOTOR CONTROL	1.727.330.22	PAGE	STU	D E R (0	0) 87/06/30 Wth	CAPSTAN	MOTOR CONTROL	1.727.330.22	PAGE 10
I ND.	POS-NO-	PART NO.	VALUE	SPECIFICATIONS / EC	UIVALENT	MANUF.							

I ND.	PO\$ - NO -	PART NO.	VALUE	SPEC	IFICATIONS / EQU	IVALENT	MANI	UF
			. 7	20	0.25W, MF			
	R109	57.11.4472	4.7 kOhm 4.7 kOhm		0.25W. MF			
	R110	57-11-4472			0.25W. MF			
	R111	57-11-4681	680 Ohm 27 kOhm		0.25W. MF			
	R * * * 112	57-11-4273			0.25W. MF			
	R113	57-11-4273	27 kOhm		0.25W. MF			
	R115 R116	57-11-4105	1 MOhm 3.3 kUhm		0.25W, MF			
	R117	57.11.4332 57.11.4682	6+8 kOhm		0.25W, MF			
			560 Ohm		0.25W. MF			
	R118 R119	57-11-4561 57-11-4103	10 kOhm		0.25W, MF			
	R120	57.11.4561	560 Ohm		0.25W, MF			
	R 121	57.11.4121	120 Ohm		0.25W, MF			
			1.20 Unm 1.2 kOhm		0.25W. MF			
	R • • • 122 R • • • 123	57.11.4122 57.11.3911	910 Ohm		0.25W. MF			
	R124	57-11-4333	33 kOhm		0.25W. MF			
		57.11.4101	100 Ohm		0.25W. MF			
	R125	57.11.4101	4.7 kOhm		0.25W. MF			
	R • • • 126 R • • • 127		1 kOhm		0.25W, MF			
	R 127	57-11-4102	1 kOhm		0.25W, MF			
	R * * * 129	57-11-4102 57-11-4000	0 Ohm	2.49	0.2384 11			
	R***129	57.56.5228	0 • 22 Ohm	5%-	4.0 W. Wire			
	R131	57.11.4102	1 kOhm		0.25W. MF			
	R132	57.11.4332	3.3 kOhm		0.25W, MF			
	Reee 133	57.11.4105	1 MOhm		0.25W. MF			
	R 134	57-11-4222	2.2 kOhm		0.25W, MF			
	R135	57-11-4152	1.5 kOhm		0.25W. MF			
	R 136	57.11.4332	3.3 kOhm		0.25W, MF			
	R 137	57.11.4154	150 kOhm		0-25W- MF			
	R136	57.11.4123	12 kOhm		0.25W, MF			
	R 139	57.11.4102	1 kOhm		0.25W. MF			
	Ree 140	57.11.4122	1.2 kOhm		0.25W. MF			
	R 141	57-11-4472	4.7 kOhm		0.25W. MF			
	R 142	57.11.4102	1 k0hm		0.25W. MF			
		57.11.4102	3.3 kOhm		0.25W, MF			
	R • • • 143 R • • • 145	57-56-5108	0-1 Ohm		4.0 W. Wire			
	R145	57.56.5108	0.1 Ohm		4.0 W. Wire			
	R 145	57.11.4152	1.5 kOhm		0.25W, MF			
	K • • • 141	2101104132	T. 3 KUMIII	2.49	OCCUMY ME			
5 T U	D E R (00	) 87/06/30 Wth	CAPSTAN	MOTOR	CONTROL	1.727.330.22	PAGE	

IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R148	57-11-4562	5.6 kOhm	2% 0.25W MF	
	Rees 149	57-11-4562	5.6 kOhm	2%, 0-25W, MF	
	R150	57-11-4152	1.5 kOhm	2%, 0.25W, MF	
	R 151	57-11-4392	3.9 kOhm	2% 0.25W MF	
	Ree • 152	57.11.4102	1 kOhm	2% 0.25W MF	
	Rese 153	57.11.4472	4.7 kOhm	2%, 0.25W, MF	
	Rese 154	57.11.4152	1.5 kOhm	2% 0.25W. MF	
	R155	57.11.4120	12 Ohm	2%, 0.25W, MF	
	R156	57.11.4120	12 Ohm	2%, 0.25W, MF	
	R157	57-11-4479	4.7 Ohm	2% 0.25W MF	
	R 158	57.11.4479	4.7 Ohm	2%, 0.25W, MF	
	Ree 159	57.11.4120	12 Ohm	2%, 0.25W, MF	
	R160	57.11.4120	12 Ohm	2%, 0.25W. MF	
	RZ 1	57.88.4103	8≑10 kOhm	5%, Single Line	
	TP1	54.02.0320	1 Pole	Tab	
	TPanas2	54.02.0320	1 Pole	Tab	
	TP3	54-02-0320	1 Pole	Tab	
	TP 4	54.02.0320	1 Pole	Tab	
	TP 5	54.02.0320	1 Pole	Tab	
	W 1	1.010.321.64		Wire Bridge	
	XIC1	53.03.0166	8 Pole	IC socket	
	XIC 2	53.03.0166	8 Pole	IC socket	
	X IC 3	53.03.0166	8 Pole	IC socket	
	XIC 4	53.03.0166	8 Pole	IC socket	
	XIC 5	53.03.0166	8 Pole	IC socket	
	XIC * * * 6	53.03.0166	8 Pole	IC socket	
	X1C 7	53.03.0166	8 Pole	IC socket	
	XIC 8	53.03.0168	16 Pole	IC socket	
	X16 9	53.03.0168	16 Pole	IC socket	
	XIC 10	53.03.0168	16 Pole	IC socket	
	XIC11	53.03.0168	16 Pole	IC socket	
	XIC12	53.03.0168	16 Pole	IC socket	
	XIC13	53.03.0168	16 Pole	IC socket	
sτυ	DER (O	0) 8 <b>7/</b> 06/30 <b>W</b> th	CAPSTA	MOTOR CONTROL 1-72	7.330.22 PAGE 9

## CAPSTAN START CONTROL 1.727.332.00 (DIAGRAM SEE PAGE 6/45)



IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP1	1.727.332.11 1.727.332.10		Capstan Start Ctl. PCB	
	MP 3			Wiring List	
	P1	54.01.0223	4 Po1	CIS Pin Strip	
	01	50.03.0436	BC237B	BC5478, BC550B NPN	ITT • Mot • Ph • Sie • Tf
	Q2	50.03.0436	BC237B	BC547B, BC550B NPN	ITT,Mot,Ph,Sie,Tf
	Q3	50.03.0329	WP 146	FET P-CH	
	R 1	57.11.4563	56 kOhm	2%, 0.25W, MF	
	R 2	57.11.4563	56 kOhm	2%, 0.25W, MF	
	R 3	57-11-4124	120 kOhm	2%, 0.25W, MF	
	R 4	57-11-4822	8.2 kOhm	2%, 0.25W. MF	
	R 5	57-11-4223	22 kOhm	2% - 0 - 25W - MF	
	R *****	57-11-4154	150 kOhm	2%, 0.25H, MF	
	R * * * * * 7	57.11.4105	1 MOhm	2%, 0.25W, MF	
	R 8	57.11.4473	47 kOhm	2%, 0.25W, MF	

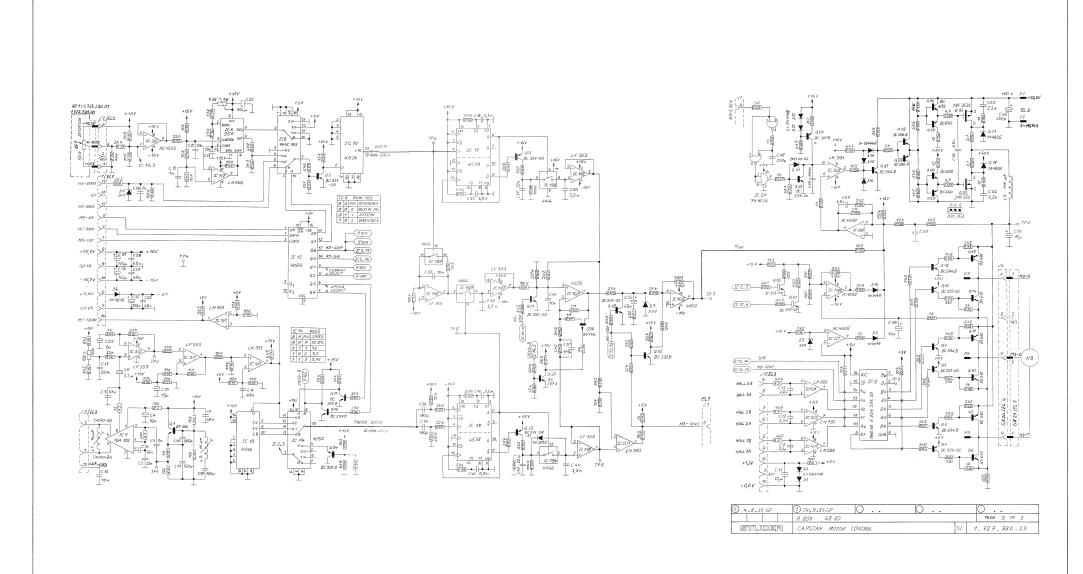
MANUFACTURER:

ORIG 87/06/30

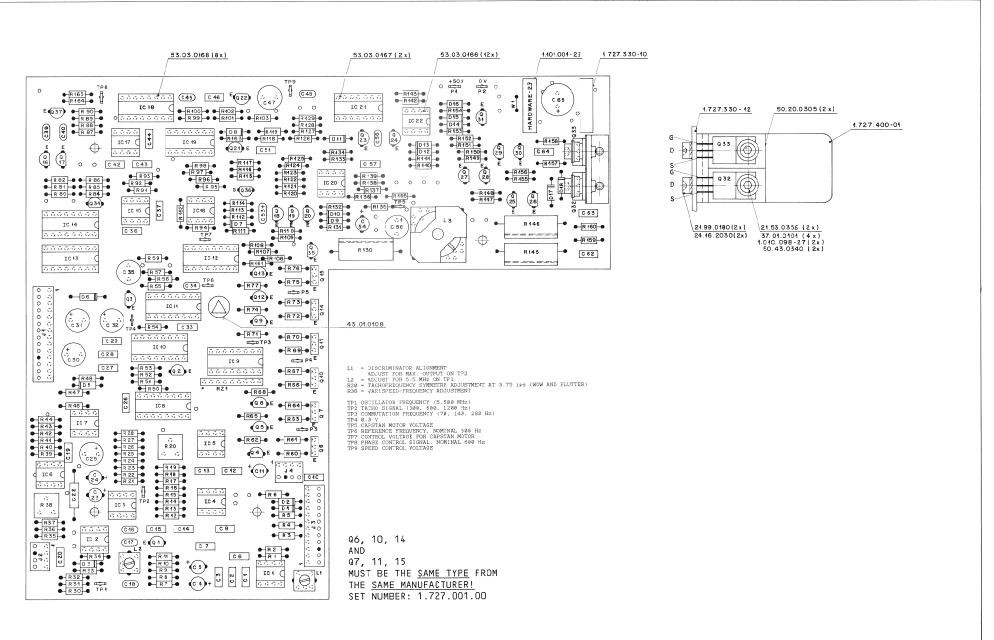
S T U D E R (00) 87/06/30 Wth CAPSTAN SRART CTL. 80ARD 1.727.332.00 PAGE 1

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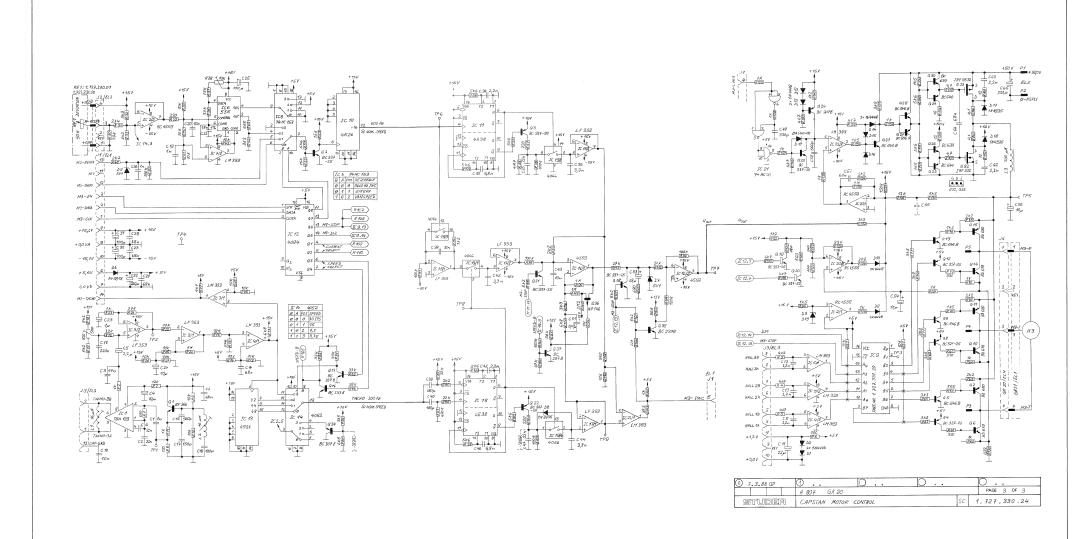


ND•	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		P0S+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAI
	C1 C2 C3 C4 C5 C6 C7	59.06.0102 59.06.0223 59.06.0473 59.22.6100 59.22.8229 59.06.0223 59.06.0683	1 nF 22 nF 47 nF 10 uF 2+2 uF 22 nF 68 nF 2+2 nF	10% 63 V PETP 10% 63 V PETP 10% 65 V PETP 10% 65 V PETP -20% 35 V EL 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			MP6 MP7 MP8 MP9 MP10 MP11 MP12 MP13	37.01.0101 50.20.0404 1.010.098.27 50.20.0305 1.727.330.10 1.727.331.01 43.01.0108 1.101.001.23	4 pcs 2 pcs 2 pcs 2 pcs 1 pce 1 pce 1 pce 1 pce	Disc spring D3*2/8*0 * 0*3 Insulating pass through D6*0/3*5 Distance socket D3*1/7*0 * 2*3 Greased insulation for TD 220 Months of TD 220 Mont
	C 10 C 12 C 13 C 14	59.06.0103 59.22.5220 59.06.0222 59.06.0222 59.06.0683	10 nF 22 uF 2-2 nF 2-2 nF 68 nF	10% 63 V PETP -20% 25 V EL 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			P 2 P 3 P 4	54.02.0320 54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole 1 Pole	Tab Tah Tab Tab
	C15 C16 C16 C19	59-06-0224 59-34-5561 59-34-4151 59-34-4101 59-06-0102	220 nF 560 pF 150 pF 100 pF 1 nF	10% 63 V PETP 5% 63 V CER 5% 63 V CER 5% 63 V CER 10% 63 V PETP			Q1 Q2 Q3	54.02.0320 50.03.0514 50.03.0340 50.03.0351	1 Pole BF 366 BC 337-25 BC 327-25	T ab NPN NPN PNP
	C 20 C 22 C 23 C 24 C 25	59.06.0103 59.12.7182 59.22.8109 59.22.6100 59.22.5101	10 nF 1.8 nF 1 uF 10 uF 100 uF	10% 63 V PETP 1% 03 V PS -150 *-00ppm/K -20% 50 V EL -20% 35 V EL -20% 25 V EL			Q6 Q7 Q8	50.03.0351 50.03.0491 50.03.0749 50.03.0799 50.03.0351	BC 327-25 BC 546 B BD 679 BD 680 BC 327-25	PAP NPN Darl。 NPN (see note 1) Pho Darl。 PAP (see note 1) Pho PAP
	C 26 C 27 C 28 C 29	59.06.0102 59.06.0683 59.06.0683 59.06.0683	1 nF 68 nF 68 nF 68 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			Q9 Q10 Q11 Q12	50.03.0491 50.03.0749 50.03.0799 50.03.0351	BC 546 B BD 679 BD 680 BC 327-25	NPN Darl。 NPN (see note 1) Pho Darl。 PNP (see note 1) Pho PNP
0)	C 30 C 31 C 32 C 34	59.22.5101 59.22.5101 59.22.3221 59.06.5682 59.34.5391	100 uF 100 uF 220 uF 6-8 nF 390 pF	-20% 25 V EL -20% 25 V EL -20% 10 V EL 5% 63 V PFTP 5% 63 V CFR			Q13 Q14 Q15 Q16 Q17	50.03.0491 50.03.0749 50.03.0799 50.03.0436 50.03.0436	BC 546 B BD 679 BD 680 BC 237 B BC 237 B	Darl. NPN (see note 1) Ph. Darl. NPN (see note 1) Ph. BC 547 B BC 550 B NPN NPN NPN NPN NPN NPN NPN NPN NPN N
1)	C 34 C 35 C 36 C 37 C 39	59.06.0222 59.05.1223 59.06.0332 59.06.5103 59.34.4181	2.2 nF 22 nF 3.3 nF 10 nF 180 pF	10% 63 V PETP 1% 63 V PP 10% 63 V PETP 5% 63 V PETP 5% 63 V CER			Q18 Q19 Q20 Q21 Q21	50.03.0340 50.03.0340 50.03.0340 50.03.0340 50.03.0351	BC 337-25 BC 337-25 BC 337-25 BC 337-25 BC 327-25	NPN NPN NPN NPN PNP
ΤU		l) 87/09/24 GP		MOTOR CONTROL 1.727.330.23	PAGE 1	STU	DER (C	01) 87/09/24 GP		MOTOR CONTROL 1.727.330.23 PAGE
ID•	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MA
	C 40 C 42 C 43	59.34.4181 59.06.0332 59.06.0103	180 pF 3•3 nF 10 nF	5% 63 V CER 10% 63 V PETP 10% 63 V PETP			Q23 Q24 Q25	50.03.0340 50.03.0515 50.03.0626	BC 337-25 BC 307 B BC 640	NPN BC 557 B BC 560 B PNP PNP NPN
0) 1)	C 45 C 45 C 46 C 47	59.06.0332 59.34.5391 59.06.0222 59.06.5682 59.05.1223	3.3 nF 390 pF 2.2 nF 6.8 nF 22 nF	10% 63 V PETP 5% 63 V CER 10% 63 V PETP 5% 63 V PETP 1% 63 V PP			Q26 Q27 Q28 Q29 Q30	50.03.0551 50.03.0492 50.03.0491 50.03.0626 50.03.0551	BC 639 BC 556 B BC 546 B BC 640 BC 639	PNP NPN PNP NPN
	C48 C51 C53 C54 C56	59.34.4331 59.06.5474 59.26.0680 59.22.6100 59.22.8100	330 pF 470 nF 68 uF 10 uF 10 uF	5% 63 V CER 5% 63 V PETP 20% 6.3 V SAL -20% 35 V EL -20% 63 V EL	Ph		Q32 Q33 Q34 Q35	50.03.0491 50.03.1502 50.03.1552 50.03.0515 50.03.0436	BC 546 B IRF 522 IRF 9532 BC 307 B BC 237 B	MTP 8N10 Power FET N-Channel IR, MTP 8P10 Power FET P-Channel IR, RC 557 R RC 560 R PNP BC 547 B BC 550 B NPN
	C57 C62 C63 C64	59.06.0683 59.34.5561 59.06.0222 59.06.0222 59.06.0683	68 nF 560 pF 2+2 nF 2+2 nF 68 uF	10% 63 V PETP 5% 63 V CER 10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			Q37 R1 R2	50.03.0329 50.03.0436 57.11.4681 57.11.4102	WP 146 BC 237 B 680 Dhm 1 kOhm	p-ch FET BC 547 B 8C 550 B NPN 2%, 0.25H, MF 2%, 0.25H, MF
	D65  D1  D2  D3	59.22.8221 50.04.0125 50.04.0125 50.04.1101	220 uF 1N4448 1N4448 3.9 V	-20% 63 V EL 50 V 50 V 5% 0-4 N			R 4 R 5 R 6 R 7	57.11.4472 57.11.4472 57.11.4472 57.11.4101 57.11.4121	4.7 kOhm 4.7 kOhm 4.7 kOhm 100 Ohm 120 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	D6 D7 D8	50.04.1112 50.04.0512 50.04.1112 50.04.0134	5.1 V 1N5818 5.1 V 1N3595 DHD	5% 0.4 W 30 V 1N5819 Schottky 5% 0.4 W 150 V I rev <1 nA @ 125 V	Fc		R 9 R 10 R 11	57.11.4121 57.11.4103 57.11.4103 57.11.4102	120 Dhm 10 kOhm 10 kOhm 1 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	D9 D10 D11 D12 D13	50.04.0125 50.04.0125 50.04.0127 50.04.0125 50.04.0125	1N4448 1N4448 BAS 40-02 1N4448 1N4448	50 V 50 V 30 V BAT 85, BAT 42 Schottky 50 V 50 V	Sie∗Ph		R12 R13 R14 R15 R16	57.11.4223 57.11.4103 57.11.4103 57.11.4103 57.11.4562	22 k0hm 10 k0hm 10 k0hm 10 k0hm 5-6 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	D14 D15 D16 D17	50.04.0125 50.04.0125 50.04.0125 50.04.0508	1N4448 1N4448 1N4448 1N4935	50 V 50 V 50 V 200 V 1N4936 RGLD	Mot • GI		R17 R18 R19 R20	57.11.4682 57.11.4822 57.11.4822 58.01.8501	6.8 kOhm 8.2 kOhm 8.2 kOhm 500 Ohm 27 kOhm	2%, 0.25W, MF 2% 0.25W, MF 2%, 0.25W, MF 10%, 0.5 W, CERMET, line Trimmpote
Tυ	D18 DER (0:	50.04.0508 1) 87/09/24 GP	1N4935 CAPSTAN	200 V 1N4936 RG1D  MOTOR CONTROL 1.727.330.23	Mot+GI PAGE 2	STU	R****21 DER (0	57.11.4273 01) 87/09/24 GP		2%, 0.25%, MF  MOTOR CONTROL 1.727.330.23 PAGE
D•	P 05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+NO+	PART NO+	VALUE	SPECIFICATIONS / EQUIVALENT MA
	IC2 IC3	50.11.0137 50.09.0107 50.09.0101	TBA 129 RC 4559 LF 353 N	FM-ZF-AmpDiscriminator upc 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	Ph Ra•NEC NS•TI		R22 R23 R24	57.11.4103 57.11.4102 57.11.4105	10 kOhm 1 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
	IC 4 IC 5 IC 6 IC 7 IC 8	50.05.0283 50.05.0283 50.05.0158 50.05.0283 50.17.1153	LM 393 N LM 393 N NE 555 N LM 393 N 74 HC 153	LM 393 P Dual Comp. LM 393 P Dual Comp. LM 555 CN LM 393 P Dual Comp	NS+TI NS+TI Sig+NS NS+TI		R 25 R 26 R 27 R 28 K 30	57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4393	10 k0hm 10 k0hm 10 k0hm 10 k0hm 39 k0hm	2%, 0.25W, MF 2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25W, MF 2%, 0.25W, MF
	IC 9 IC 10 IC 11 IC 12	50.05.0206 50.07.0526 50.07.0538 50.07.0018	4526 4538 4094	Capstan motor comm. Ctl. 1.727.331.	20 St Ph+Mot		R 31 R 32 R 33 R 34 R 35	57.11.3242 57.11.4332 57.11.4822 57.11.4152 57.11.4221	2.4 kOhm 3.3 kOhm 8.2 kOhm 1.5 kOhm 220 Ohm	1%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	IC 13 IC 14 IC 15 IC 16 IC 17	50.07.0526 50.07.0024 50.09.0101 50.09.0107 50.09.0101	4052 LF 353 N RC 4559 LF 353 N	TL 072 CP Dual Op.Amp. Bi-JFET uPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	NS+TI Ra+NEC NS+TI		R 36 R 37 R 38 R 39	57.11.4333 57.11.3133 58.01.8103 57.11.4103	33 kOhm 13 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 1%, 0.25W, MF 10%, 0.5 W, CERMET, lin. Trimmpot. 2%, 0.25W, MF
	IC19 IC20 IC21 IC22	50.07.0538 50.07.0066 50.09.0107 50.17.1000 50.05.0283	**4538** **4066** RC 4559 74 HC 00 LM 393 N	uPC 4559 Dual Op-Amp. LM 393 P Dual Comp-	Ph+Mot Ra+NEC NS+TI		R • • • • 40 R • • • • 41 R • • • • 42 R • • • • 43 R • • • • 44	57-11-4103 57-11-4103 57-11-4103 57-11-4682 57-11-4332	10 kOhm 10 kOhm 10 kOhm 6.8 kOhm 3.3 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	J2 J3 J4	54.01.0293 54.01.0241 54.01.0215 54.01.0241	14 Pole 4 Pole 12 Pole 4 Pole	CIS socket strip CIS socket strip CIS socket strip CIS socket strip	AMP AMP AMP AMP		R 46 R 47 R 48 R 50 R 51	57.11.4103 57.11.4472 57.11.4222 57.11.4104 57.11.4562	10 k0hm 4.7 k0hm 2.2 k0hm 100 k0hm 5.6 k0hm	2% 0.25%, MF 2% 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
	L • • • • • 1 L • • • • • 2	1.022.222.00 1.022.222.00 1.022.251.00	16 uH 16 uH 196 uH	HF-Coil Filter Coil	St St St		R • • • • 52 R • • • • 53 R • • • • 54 R • • • • 55	57.11.4153 57.11.4153 57.11.4562 57.11.4562	15 kOhm 15 kOhm 5•6 kOhm 5•6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
		1.727.330.12 1.727.400.01 21.99.0180 21.53.0355	1 pce 1 pce 2 pcs 2 pcs	PC Board Heatsink M3 \$ 5 Cross recessed oval head scr M3 \$ 8 Hexagon socket head cap scre	St St BW		R 56 R 57 R 59 R 60 R 61	57.11.4562 57.11.4221 57.11.3104 57.11.4102 57.11.4331	5.6 kOhm 220 Ohm 100 kOhm 1 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
	MP5	24.16.2030	2 pcs	Serrat lock washer D3.2/6.0			R • • • • 62	57.11.4392	3.9 kOhm	2%, 0.25W, MF



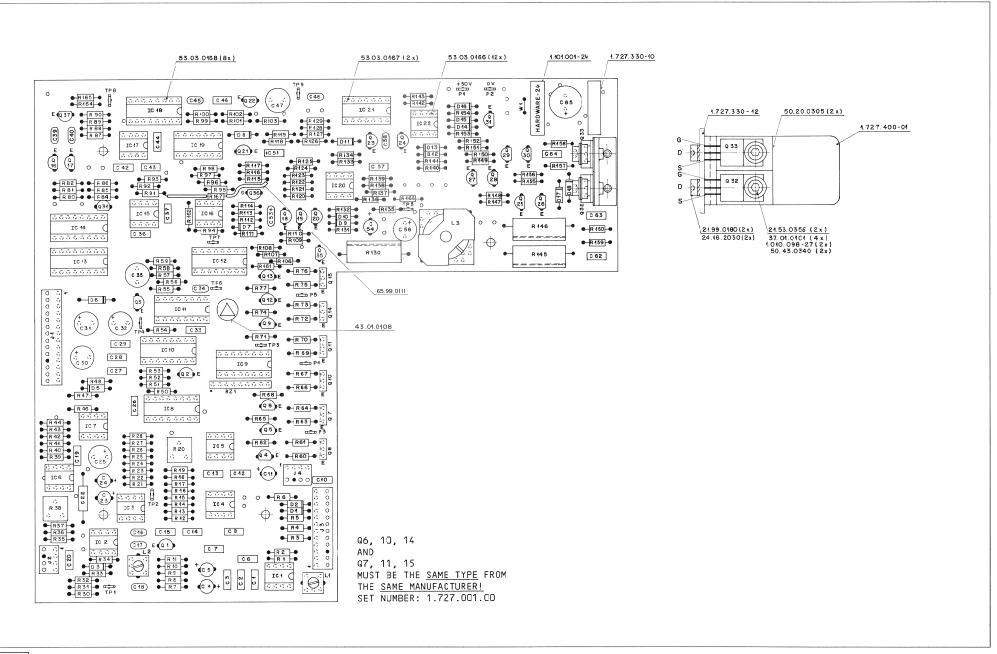
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANU
	R64	57.11.4222 57.11.4152	2.2 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	H1 1.D10.321.64 Wire Bridge XIC1 53.03.01.66 8 Pole IC socket
	R65 R66 R67	57•11•4332 57•11•4102 57•11•4331	3.3 kOhm 1 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	XIC2 53.03.0166 8 Pole IC socket XIC3 53.03.0166 0 Pole IC socket
	R68 R69 R70	57.11.4392 57.11.4222 57.11.4152	3.9 kOhm 2.2 kOhm 1.5 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MH	XIC4 53.03.0166 8 Pole IC socket XIC5 53.03.0166 8 Pole IC socket XIC6 53.03.0166 8 Pole IC socket
	R71 R72 R73	57.11.4332 57.11.4102 57.11.4331	3.3 kOhm 1 kOhm 330 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	XIC7 53.03.0166 8 Pole IC socket XIC8 53.03.0168 16 Pole IC socket XIC9 53.03.0168 16 Pole IC socket
	R • • • • 74 R • • • • 75	57•11•4392 57•11•4222	3.9 kOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	XIC10 53.03.0168 16 Pole IC socket XIC11 53.03.0168 16 Pole IC socket
	R 76 R 77 R 80	57.11.4152 57.11.4332 57.11.4682	1.5 kOhm 3.3 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%. 0.25W, MF	XIC13 53.03.0168
	R82 R84	57.11.4333 57.11.4333 57.11.4332	33 kOhm 33 kOhm 3-3 kOhm	2%, 0-25H, MF 2%, 0-25H, MF 2%, 0-25H, MF	XIC15 53.03.0166 8 Pole IC socket XIC16 53.03.0166 8 Pole IC socket XIC17 53.03.0166 8 Pole IC socket
	R • • • • 85 R • • • • 86 R • • • • 87	57•11•4333 57•11•4333 57•11•4474	33 kOhm 33 kOhm 470 kOhm	2%+ 0-25N+ MF 2%+ 0-25N+ MF 2%+ 0-25N+ MF	XIC18 53.03.0168 16 Pole IC socket XIC19 53.03.0167 14 Pole IC socket XIC20 53.03.0166 8 Polo IC socket
	R 88 R 89 R 90	57.11.4223 57.11.4223 57.11.4222	22 kOhm 22 kOhm 2•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	XIC21 53.03.0167 14 Pole IC socket XIC22 53.03.0166 8 Pole IC socket
	R91 R92 R93	57.11.4104 57.11.4122 57.11.4222	100 kOhm 1.2 kOhm 2.2 kOhm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF	
	R • • • • 94 R • • • • 95	57•11•4104 57•11•4105	100 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	R96 R97 R98	57.11.4105 57.11.4563 57.11.4104	1 MOhm 56 kOhm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R100 R101	57.11.4562 57.11.4562 57.11.4221	5.6 kOhm 5.6 kOhm 220 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 102	57.11.4562 ) 87/09/24 GP	5.6 kOhm	2%, 0.25W, MF  MOTOR CONTROL 1.727.330.23 PAGE 7	S T U D E R (01) 87/09/24 GP CAPSTAN MOTOR CONTROL 1.727.330.23 PAGE
		,,,			
	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANU
	R103 R105	57•11•3104 57•11•4102	100 kOhm 1 kOhm	1%, 0-25W, MF 2%, 0-25W, MF	(01) For Philips monostable multivibrator HEF 4538 (Ct min. = 2nF).
	R * * * 107 R * * * 108	57.11.4822 57.11.4822 57.11.4472	8.2 kOhm 8.2 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	Note 1 - For excellent wow and flutter values at 3.75 ips the NPN - respective the PNP - Transistors should be from the same manufacturer.
	R110 R111	57-11-4472 57-11-4681	4.7 kOhm 680 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	MATERIALS: CER = Ceramic,
	R112 R113 R114	57.11.4273 57.11.4273 57.11.4124	27 kOhm 27 kOhm 120 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	PETP = Polyesterfoil, PS = Polystyrol, PP = Polypropylen  MANUFACTURER: AMP = AMP Incorporated Ph = Philips
	R115 K116 R117	57.11.4105 57.11.4332 57.11.4682	1 MOhm 3.3 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	Fc = Fairchild Ra = Raytheon GI = General Instruments SGS = SGS/Ates IR = International Rectifier Sie = Siemens
	R118 R119 R120	57.11.4561 57.11.4103 57.11.4561	560 Ohm 10 kOhm 560 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	Mot = Motorola
	R • • • 121 R • • • 122 R • • • 123	57.11.4121 57.11.4122 57.11.3911	120 Ohm 1•2 kOhm 910 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF	
	R124 R125 R126	57.11.4333 57.11.4101 57.11.4472	33 kOhm 100 Ohm 4•7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R127 R128 R129	57.11.4102 57.11.4102 57.11.4000	1 kOhm 1 kOhm 0 Ohm	2% 0.25H, MF 2%, 0.25H, MF	
	R130 R131	57.56.5228 57.11.4102	0-22 Ohm 1 kOhm	5%, 4.0 We Wire 2%, 0.25W, MF 2%, 0.25W, MF	
	R132 R133 R134	57.11.4332 57.11.4105 57.11.4222	3.3 kOhm 1 MOhm 2.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R135 R136 R137	57•11•4152 57•11•4332 57•11•4154	1.5 kOhm 3.3 kUhm 150 kOhm	2%, 0.25W, MF 2%, 0.25W, MF	
	R138 R139 R140	57.11.4123 57.11.4102 57.11.4122	12 kOhm 1 kOhm 1.2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
U	R141	57.11.4472 ) 87/09/24 GP	4.7 kOhm CAPSTAN	2%, 0.25W, MF  MOTOR CONTROL 1.727.330.23 PAGE 8	ORIG 87/08/21 (01) 87/09/24 S T U D E R (01) 87/09/24 GP CAPSTAN MOTOR CONTROL 1.727.330.23 PAGE
•	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	
	R142 R143 R145	57.11.4102 57.11.4332 57.56.5108	1 kOhm 3•3 kOhm 0•1 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 10%, 4.0 W, Wire	
	R • • • 146 R • • • 147	57.56.5108 57.11.4152 57.11.4562	0.1 Ohm 1.5 kOhm 5.6 kOhm	10%, 4.0 W, Wire 2%, 0.25W, MF 2%, 0.25W, MF	
	R148 R149 R150	57.11.4562 57.11.4152	5.6 k0hm 1.5 k0hm	2%, 0.25W, MF 2%, 0.25W, MF	
	R151 R152 R153	57.11.4392 57.11.4102 57.11.4472	3.9 kOhm 1 kOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 154 R • • • 155 R • • • 156	57.11.4152 57.11.4120 57.11.4120	1.5 kOhm 12 Ohm 12 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	R157 R158 R159	57.11.4479 57.11.4479 57.11.4120	4.7 Ohm 4.7 Ohm 12 Ohm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF	
	R160 R161 R162	57.11.4120 57.11.4822 57.11.4563	12 Ohm 8.2 kOhm 56 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	R163 R164 R165	57.11.4224 57.11.4473 57.11.4154	220 kOhm 47 kOhm 150 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R • • • 166	57.11.4223	22 kOhm	2%, 0.25W, MF	
	RZ1	57.88.4103 54.02.0320	8\$10 kOhm	5%. Single Line	
	TP2 TP3 TP4	54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole	Tab Tab Tab	
	TP 6 TP 6	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab	
	TP 8 TP 9	54.02.0320 54.02.0320	1 Pole 1 Pole	Tab Tab	





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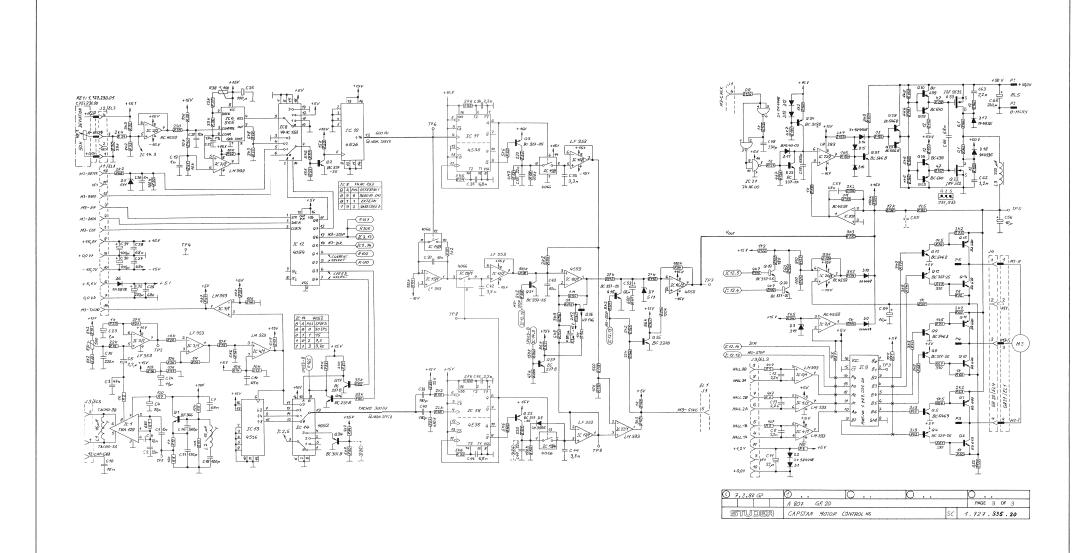
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INO.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQU	JIVALENT	MA N
	C 2	59.06.0102 59.06.0223 59.06.0473	1 nF 22 nF 47 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			MP7 MP8 MP9	50.20.0404 1.010.098.27 50.20.0305	2 pcs 2 pcs 2 pcs	Insulating pass thr Distance socket D3 Greased insulation	1/7.0 = 2.3	
	C 5	59.22.6100 59.22.8229	10 uF 2•2 uF	-20% 35 V EL -20% 50 V EL			MP10 MP11	1.727.330.10	1 pce 1 pce	No. label No. label 5 = 17 ESE label	101 10 220	
	C • • • • • 6 C • • • • • 7 C • • • • • 8	59.06.0223 59.06.0683 59.06.0222	22 nF 68 nF 2.2 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			MP12	43.01.0108	1 pce 1 pce	Hardware label -24		
	C10 C11 C12	59.06.0103 59.22.5220 59.06.0222	10 nF 22 uF 2•2 nF	10% 63 V PETP -20% 25 V EL 10% 63 V PETP			P • • • • • 2 P • • • • • 2 P • • • • 3	54.02.0320 54.02.0320 54.02.0320	l Pole l Pole l Pole	Tab Tab Tab		
	C13 C14 C15	59.06.0222 59.06.0683 59.06.0224	2.2 nF 68 nF 220 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			P • • • • • • 5	54.02.0320 54.02.0320	1 Pole 1 Pole	Tab Tab		
	C16 C17 C18	59.34.5561 59.34.4151 59.34.4101	560 pF 150 pF 100 pF	5% 63 V CER 5% 63 V CER 5% 63 V CER			Q 2 Q 3	50.03.0514 50.03.0340 50.03.0351	BF 366 BC 337-25 BC 327-25		NPN NPN PNP	,
	C 19 C 20 C 22	59.06.0102 59.06.0103 59.12.7182	1 nF 10 nF 1.8 nF	10% 63 V PETP 10% 63 V PETP 1% 63 V PS -150 +-60ppm/K			Q5 Q6	50.03.0351 50.03.0491 50.03.0749	BC 327-25 BC 546 B BD 679	Dar1.	PNP NPN NPN (see note :	1) Ph <sub>2</sub> :
	C 24 C 25	59.22.8109 59.22.6100	1 uF 10 uF 100 uF	-20% 50 V EL -20% 35 V EL -20% 25 V EL			Q7 Q8	50.03.0799 50.03.0351 50.03.0491	BD 680 BC 327-25 BC 546 B	Dar1.	PNP (see note : PNP NPN	i) Pho:
	C 26 C 27	59.22.5101 59.06.0102 59.06.0683	1 nF 68 nF	10% 63 V PETP 10% 63 V PETP			Q10 Q11	50.03.0749 50.03.0799 50.03.0351	BD 679 BD 680 BC 327-25	Darl. Darl.	NPN (see note : PNP (see note : PNP	
	C 28 C 29 C 30	59.06.0683 59.06.0683 59.22.5101	68 nF 68 nF 100 uF	10% 63 V PETP -20% 25 V EL			Q12 Q13 Q14	50.03.0491 50.03.0749	BC 546 B BD 679	Darl.	NPN (see note )	1) Ph.
	C 32 C 33	59.22.5101 59.22.3221 59.06.5682	100 uF 220 uF 6•8 nF	-20% 25 V EL -20% 10 V EL 5% 63 V PETP			Q15 Q16 Q17	50.03.0799 50.03.0436 50.03.0436	BD 680 BC 237 B BC 237 B	Darl. BC 547 B BC 550 B BC 547 B BC 550 B	PNP (see note : NPN NPN	I) Ph∘:
	C 34 C 35 C 36	59.06.0222 59.05.1223 59.06.0332	2•2 nF 22 nF 3•3 n⊢	10% 63 V PETP 1% 63 V PP 10% 63 V PETP			Q18 Q19 Q20	50.03.0340 50.03.0340 50.03.0340	BC 337-25 BC 337-25 BC 337-25		NPN NPN NPN	
	C 37 C 39	59.06.5103 59.34.4181	10 nF 180 pF	5% 63 V PETP 5% 63 V CER 5% 63 V CER			Q21 Q22 Q23	50.03.0340 50.03.0351 50.03.0340	BC 337-25 BC 327-25 BC 337-25		NPN PNP NPN	
T U	C 40 D E R (00	59.34.4181 0) 88/03/07 GP	180 pF CAPSTAN	MOTOR CONTROL 1.727.330.24	PAGE 1	STU		0) 88/03/07 GP		MOTOR CONTROL	1.727.330.24	PAGE
ND •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I NO •	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQ	UI VALENT	MA
	C 42 C 43 C 44	59.06.0332 59.06.0103 59.06.0332	3.3 nF 10 nF 3.3 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			Q 24 Q 25 Q 26	50.03.0515 50.03.0626 50.03.0551	BC 307 B BC 640 BC 639	BC 557 B BC 560 B	PNP PNP NPN	
	C45 C46	59.06.0222 59.06.5682	2.2 nF 6.8 nF 22 nF	10% 63 V PETP 5% 63 V PETP 1% 63 V PP			Q27 Q28 Q29	50.03.0492 50.03.0491 50.03.0626	BC 556 B BC 546 B BC 640		PNP NPN PNP	
	C 47 C 48 C 51	59.05.1223 59.34.4331 59.06.5474	330 pF 470 nF	5% 63 V CER 5% 63 V PETP	Ph		Q30	50.03.0551 50.03.0491	BC 639 BC 546 B IRF 522	MTP 8N10 Power F	NPN NPN ET N-Channel	1R e
	C *** * 54 C *** * 56	59.26.0680 59.22.6100 59.22.8100	68 uF 10 uF 10 uF	20% 6.3 V SAL -20% 35 V EL -20% 63 V EL	PII		Q 32 Q 33 Q 34	50.03.1502 50.03.1552 50.03.0515	IRF 9532 BC 307 B	MTP 8P10 Power F BC 557 B BC 560 B	ET P-Channel PNP	IR.
	C 57 C 58 C 62	59.06.0683 59.34.5561 59.06.0222	68 nF 560 pF 2•2 nF	10% 63 V PETP 5% 63 V CER 10% 63 V PETP			Q35 Q36 Q37	50.03.0436 50.03.0329 50.03.0436	BC 237 B WP 146 BC 237 B	BC 547 B BC 550 B p-c BC 547 B BC 550 B	h FET	
	C 63 C 64 C 65	59.06.0222 59.06.0683 59.22.8221	2.2 nF 68 nF 220 uF	10% 63 V PETP 10% 63 V PETP -20% 63 V EL			R • • • • • 1 R • • • • • 2	57.11.3681 57.11.3102	680 Ohm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	D1 D2	50.04.0125 50.04.0125	1N4448 1N4448	50 V 50 V			R 3 R 4 R 5	57.11.3472 57.11.3472 57.11.3472	4.7 kOhm 4.7 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	05 06	50.04.1101 50.04.1112 50.04.0512	3.9 V 5.1 V 1N5818	5% 0.4 W 5% 0.4 W 30 V 1N5819 Schottky			R • • • • • 6 R • • • • • 7 R • • • • 8	57.11.3101 57.11.3121 57.11.3121	100 Ohm 120 Ohm 120 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D7 D8 D9	50.04.1112 50.04.0134 50.04.0125	5.1 V 1N3595 DHD 1N4448	5% 0.4 W 150 V I rev <1 nA @ 125 V -50 V	Fc		R 9 R 10 R 11	57.11.3103 57.11.3103 57.11.3102	10 kOhm 10 kOhm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D10 D11 D12	50.04.0125 50.04.0127 50.04.0125	1N4448 BAS 40-02 1N4448	50 V 30 V BAT 85, BAT 42 Schottky 50 V	Sie+Ph		R12 R13 R14	57-11-3223 57-11-3103 57-11-3103	22 kOhm 10 kOhm 10 kOhm	1% 0.25W MF 1% 0.25W MF 1% 0.25W MF		
	D13 D14	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V 50 V 50 V			R15 R16	57.11.3103 57.11.3562 57.11.3682	10 kOhm 5.6 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	D15 D16 D17	50.04.0125 50.04.0508	1N4448 1N4935	50 V 200 V 1N4936 RG1D	Mot + GI		R 17 R 18 R 19	57-11-3822 57-11-3822	8.2 kOhm 8.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	lie Trimmot.	
	D18 IC1	50.04.0508 50.11.0137	1N4935 TBA 129	200 V 1N4936 RG1D FM-ZF-Amp••Discriminator	Mot•GI Ph		R 20 R 21 R 22	58.01.8501 57.11.3273 57.11.3103	500 Ohm 27 kOhm 10 kOhm	10%, 0.5 W. CERMET, 1%, 0.25W, MF 1%, 0.25W, MF	TITLS TELEMIPOLS	
T U	D E R (0	0) 88/03/07 GP	CAPSTAN	MOTOR CONTROL 1.727.330.24	PAGE 2	SΤU	D E R (	00) 88/03/07 GP	CAPSTAN	MOTOR CONTROL	1.727.330.24	PAGE
<b>ND</b> •	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQ	UI VAL ENT	M
	IC2	50.09.0107	RC 4559	uPC 4559 Dual Op•Amp•	Ra+NEC		R****23	57-11-3102	1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	IC4 IC5	50.09.0101 50.05.0283 50.05.0283	LF 353 N LM 393 N LM 393 N	TL 072 CP Dual Op.Amp. Bi-JFET LM 393 P Dual Comp. LM 393 P Dual Comp.	NS.TI NS.TI NS.TI		R 24 R 25 R 26	57-11-3105 57-11-3103 57-11-3103	1 MOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	IC • • • • 6 IC • • • • 7 IC • • • • 8	50.05.0158 50.05.0283 50.17.1153	NE 555 N LM 393 N 74 HC 153	LM 555 CN LM 393 P Dual Comp	Sig+NS NS+TI		R • • • • 27 R • • • • 28 R • • • • 30	57.11.3103 57.11.3103 57.11.3393	10 kOhm 10 kOhm 39 kOhm	1%+ 0+25W+ MF 1%+ 0+25W+ MF 1%+ 0+25W+ MF		
	IC9 IC10 IC11	50.05.0206 50.07.0526 50.07.0538	4520 4538	Capstan motor comm. Ctl. 1.727.331	•20 St Ph•Mot		R 31 R 32 R 33	57.11.3242 57.11.3332 57.11.3822	2.4 k0hm 3.3 k0hm 8.2 k0hm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC 12 IC 13 IC 14	50.07.0018 50.07.0526 50.07.0024	4094 4526				R 34 R 35 R 36	57.11.3152 57.11.3221 57.11.3333	1.5 kOhm 220 Ohn 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC15 IC16	50.09.0101 50.09.0107	LF 353 N RC 4559 LF 353 N	TL 072 CP Dual Op-Amp. Bi-JFET uPC 4559 Dual Op-Amp.	NS•TI Ra•NEC NS•TI		R 37 R 38 R 39	57.11.3133 58.01.8103 57.11.3103	13 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 10%, 0.5 W, CERMET, 1%, 0.25W, MF	lin. Trimmpot.	
	IC18 IC19	50.09.0101 50.07.0538 50.07.0066	4538 4066	TL 072 CP Dual Op.Amp. Bi-JFET	Ph <sub>*</sub> Mot Ra*NEC		R 41 R 42	57.11.3103 57.11.3103 57.11.3103	10 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	IC 20 IC 21 IC 22	50.09.0107 50.17.1000 50.05.0283	RC 4559 74 HC DO LM 393 N	uPC 4559	NS,TI		R • • • • 43 R • • • • 44	57-11-3682 57-11-3332 57-11-3103	6.8 kOhm 3.3 kOhm 10 kOhm	1%, 0.25W. MF 1%, 0.25W. MF 1%, 0.25W. MF 1%, 0.25W. MF		
	J1 J2	54-01-0293 54-01-0241	14 Pole 4 Pole	CIS socket strip CIS socket strip	AMP AMP		R • • • • 46 R • • • • 47 R • • • • 48	57.11.3472 57.11.3222	4.7 kOhm 2.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
	J3 J4	54.01.0215 54.01.0241	12 Pole 4 Pole	CIS socket strip CIS socket strip	AMP AMP		R • • • • 50 R • • • • 52	57.11.3104 57.11.3562 57.11.3153	100 k0hm 5-6 k0hm 15 k0hm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	L2 L3	1.022.222.00 1.022.222.00 1.022.251.00	16 uH 16 uH 196 uH	HF-Coil HF-Coil Filter Coil	St St St		R • • • • 53 R • • • • 54 R • • • • 55	57.11.3153 57.11.3562 57.11.3562	15 kOhm 5•6 kOhm 5•6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	MP1 MP2	1.727.330.12 1.727.400.01	1 pce 1 pce	PC Board Heatsink	St St		R • • • • 56 R • • • • 57 R • • • • 58	57.11.3562 57.11.3221 57.11.5475	5.6 kOhm 220 Ohm 4.7 MOhm	1%, 0.25W, MF 1%, 0.25W, MF 5%, 0.25W, MF		
	MP3 MP4	21.99.0180 21.53.0355	2 pcs 2 pcs	M3 ÷ 5 Cross recessed oval head so M3 ÷ 8 Hexagon socket head cap scr Serrat lock washer 03+2/6+0	rew		R 60 R 61	57.11.3104 57.11.3102 57.11.3331	100 kOhm 1 kOhm 330 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	MP6	24.16.2030 37.01.0101	2 pcs 4 pcs	Serrat lock washer U3+2/6+U Disc spring D3+2/8+O * O+3			R 62	57-11-3392	3.9 kOhm	1%, 0.25W, MF		



D. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANU
R63	57.11.3222 57.11.3152	2.2 kOhm 1.5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		W1 1.010.321.64 Wire Bridge
R64 R65 R66	57-11-3332 57-11-3102	3-3 kOhm 1 kOhm	1%, 0-25W, MF 1%, 0-25W, MF		XIC1 53-03-0166 8 Pole IC socket XIC2 53-03-0166 8 Pole IC socket
R67 R68	57.11.3331 57.11.3392	330 Ohm 3•9 kOhm	1%, 0.25W; MF 1%, 0.25W; MF		XIC3 53.03.0166 & Pole IC socket XIC4 53.03.0166 & Pole IC socket
R59 R70	57.11.3222 57.11.3152 57.11.3332	2.2 kOhm 1.5 kOhm 3.3 kUhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC5 53,03.0166 8 Pole IC socket XIC6 53.03.0166 8 Pole IC socket xIC7 53.03.0166 8 Pole IC socket
R71 R72 R73	57-11-3332 57-11-3102 57-11-3331	1 kOhm 330 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		XIC8 53.03.0168 16 Pole IC socket XIC9 53.03.0168 16 Pole IC socket
R74 R75	57.11.3392 57.11.3222	3.9 kOhm 2.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC10 53.03.0168 16 Pole IC socket XIC11 53.03.0168 16 Pole IC socket
R76 R77	57.11.3152 57.11.3332	1.5 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC12 53.03.0168 16 Pole IC socket XIC13 53.03.0168 16 Pole IC socket
R * * * * * 80 R * * * * 81 R * * * * 82	57.11.3682 57.11.3333 57.11.3333	6.8 kOhm 33 kOhm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC14 53.03.0168 16 Pole IC socket XIC15 53.03.0166 8 Pole IC socket XIC16 53.03.0166 8 Pole IC socket
R84 R85	57.11.3332 57.11.3333	3.3 kOhm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC17 53.03.0166 8 Pole IC socket XIC18 53.03.0168 16 Pole IC socket
R 86 R 87	57.11.3333 57.11.3474	33 kOhm 470 kOhm 22 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		XIC19 53.03.0167 14 Pole IC socket XIC20 53.03.0166 8 Pole IC socket XIC21 53.03.0167 14 Pole IC socket
R * * * * * 89 R * * * * 90	57.11.3223 57.11.3223 57.11.3222	22 kOhm 2•2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		XIC22 53.03.0166 8 Pole IC socket
R91 R92	57.11.3104 57.11.3122	100 kOhm 1.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R93 R94 R95	57.11.3222 57.11.3104 57.11.3105	2•2 k0hm 100 k0hm 1 M0hm	1%, 0.25W; MF 1%, 0.25W; MF 1%, 0.25W; MF		
R96 R97	57.11.3105 57.11.3563	1 MOhm 56 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R98 R99	57.11.3104 57.11.3562	100 kOhm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R101 R102	57.11.3562 57.11.3221 57.11.3562	5.6 kühm 220 Dhm 5.6 kühm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
TUDER (00	) 88/03/07 GP	CAPSTAN	MOTOR CONTROL 1.727.330.2	24 PAGE 7	S T U D E R (00) 88/03/07 GP CAPSTAN MOTOR CONTROL 1.727.330.24 PAGE
D. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MAN
R103 R106	57.11.3104 57.11.3102	100 kOhm l kOhm	1%, 0.25H, MF 1%, 0.25H, MF		Note 1 - For excellent wow and flutter values at 3.75 ips the NPN -
R107 R108	57•11•3822 57•11•3822 57•11•3472	8.2 kOhm 8.2 kOhm 4.7 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		respective the PNP - Transistors should be from the same manufacturer•
R109 R110 R111	57.11.3472 57.11.3681	4.7 kOhm 680 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		MATERIALS: CER = Ceramic, EL = Electrolytic, MF = Metalfilm PETP = Polyesterfoil, PS = Polystyrol, PP = Polypropylen
Rece112 Rece113	57.11.3273 57.11.3273	27 kOhm 27 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		MANUFACTURER: AMP = AMP Incorporated Ph = Philips Fc = Fairchild Ra = Raytheon
R114 R115 R116	57-11-3124 57-11-3105 57-11-3332	120 kOhm 1 MOhm 3-3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		GI = General Instruments
R117 R118	57.11.3682 57.11.3561	6∙8 kOhm 560 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		Mot = Motorola Sig = Signetics NEC = Nippon Electric Corp. St = Studer
R119 R120	57-11-3103 57-11-3561	10 k0hm 560 Ohm 180 Ohm	1%, 0-25W, MF 1%, 0-25W, MF 1%, 0-25W, MF		NS = National Semiconductor TI = Texas Instruments
R121 K122 R123	57.11.3181 57.11.3122 57.11.3911	1.2 kOhm 910 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		
R • • • 124 R • • • 125	57-11-3333 57-11-3101	33 k0hm 100 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		
R126 R127 R128	57.11.3472 57.11.3102 57.11.3102	4.7 kOhm 1 kOhm 1 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		
R129 K130	57.11.4000 57.56.5228	0 Ohm 0.22 Ohm	5%, 4.0 W. Wire		
R131 R132	57.11.3102 57.11.3332	1 kOhm 3.3 kOhm	1%, 0.25H, MF 1%, 0.25H, MF 1%, 0.25H, MF		
R133 R134 R135	57.11.3105 57.11.3222 57.11.3152	1 MOhm 2•2 kOhm 1•5 kOhm	1%, 0.25%, MF 1%, 0.25%, MF		
R136 R137	57-11-3332 57-11-3154	3.3 kOhm 150 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R138 R139	57.11.3123 57.11.3102	12 kOhm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R140 R141	57.11.3122 57.11.3472	1.2 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		ORIG 88/03/07
TUDER (OC	0) 88/03/07 GP	CAPSTAN	MOTOR CONTROL 1.727.330.	24 PAGE 8	S T U D E R (00) 88/03/07 GP CAPSTAN HOTOR CONTROL 1-727-330-24 PAGE
ID. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.	
R * * * 142 K * * * 143 R * * * 145	57-11-3102 57-11-3332 57-56-5108	1 kOhm 3.3 kOhm 0.1 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 10%, 4.0 %, Wire		
R146 K147	57.56.5108 57.11.3152	0.1 Ohm 1.5 kOhm	10%, 4.0 W. Wire 1%, 0.25W. MF		
R • • • 148 R • • • 149	57.11.3562 57.11.3562 57.11.3152	5.6 kOhm 5.6 kOhm 1.5 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		
R • • • 150	57.11.3152 57.11.3392 57.11.3102	3.9 kOhm 1 kOhm	1%, 0.25W, MF 1%, 0.25W, MF		
R151 R152	57.11.3472 57.11.3152	4.7 kOhm 1.5 kOhm 12 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R • • • 152 R • • • 153 R • • • 154	F-9 1 - 0 - 0 -	12 Ohm	1%+ 0+25W+ MF 1%+ 0+25W+ MF 1%+ 0+25W+ MF		
R152 R153	57-11-3120 57-11-3120 57-11-3479	4.7 Ohm			
R152 R153 R154 R155 R156 R157	57-11-3120 57-11-3479 57-11-3479 57-11-3120	4.7 Ohm 4.7 Ohm 12 Ohm	1%, 0.25W, MF 1%, 0.25W, MF		
R152 R153 R154 R155 R156 R158 R159 R160	57-11-3120 57-11-3479 57-11-3479	4.7 Ohm 12 Ohm 12 Ohm 8.2 kOhm	1%, 0.25W, MF		
R152 R153 R154 R155 R156 R157 R159 R160 R161 R162 R164 R165	57-11-3120 57-11-3479 57-11-3479 57-11-3120 57-11-3120 57-11-363 57-11-363 57-11-3473 57-11-3154	4.7 Ohm 12 Ohm 12 Ohm 12 Ohm 8.2 kOhm 56 kOhm 47 kOhm 150 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		
R152 R153 R154 R155 R157 R158 R159 R160 R161 R162	57-11-3120 57-11-3479 57-11-3479 57-11-3120 57-11-3120 57-11-3822 57-11-3563 57-11-3473	4.7 Ohm 12 Ohm 12 Ohm 12 Ohm 8.2 kOhm 56 kOhm 47 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
R152 R153 R154 R155 R157 R158 R159 R160 R161 R162 R164 R165 R167	57.11.3120 57.11.3479 57.11.3479 57.11.3120 57.11.3120 57.11.3822 57.11.3563 57.11.3453 57.11.3154 57.11.3223 57.11.3223 57.11.5225	4.7 Ohm 12 Ohm 12 Ohm 8.2 KOhm 56 KOhm 47 KOhm 22 KOhm 2.2 MOhm 8*10 KOhm	1%, 0.25%, MF 5%, 0.25%, MF 5%, 0.25%, MF		
R152 R153 R154 R155 R156 R157 R159 R160 R161 R162 R165 R167 R167 R167	57.11.3120 57.11.3479 57.11.3479 57.11.3120 57.11.3120 57.11.3563 57.11.3563 57.11.3563 57.11.3553 57.11.3553 57.11.3523 57.11.3223 57.11.5225 57.88.4103	4.7 Ohm 12 Ohm 12 Ohm 8.2 kOhm 56 kGhm 47 kOhm 150 kOhm 22 kGhm 2.2 MOhm 8*10 kOhm 1 Pole 1 Pole	1%, 0.25%, MF 5%, 0.25%, MF 5%, 0.25%, MF		
R 152 R 153 R 154 R 155 R 156 R 157 R 158 R 160 R 160 R 160 R 161 R 165 R 167 R 167 R 167	57.11.3120 57.11.3479 57.11.3479 57.11.3120 57.11.3120 57.11.3822 57.11.3563 57.11.3473 57.11.3223 57.11.3223 57.11.5225 57.88.4103 54.02.0320 54.02.0320 54.02.0320	4-7 Ohm 12 Ohm 12 Ohm 6-2 KOhm 56 KOhm 47 KOhm 22 KOhm 22 KOhm 150 KOhm 1 Pole 1 Pole 1 Pole 1 Pole 1 Pole	1%, 0.25%, MF 5%, 0.25%, MF 5%, Single Line Tab		
R152 R153 R154 R156 R156 R158 R158 R159 R160 R161 R162 R163 R167 R167 R167	57-11-3120 57-11-3479 57-11-3479 57-11-3120 57-11-3120 57-11-3922 57-11-3922 57-11-3923 57-11-3473 57-11-3223 57-11-3225 57-88-4103 54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320 54-02-0320	4-7 Ohm 12 Ohm 12 Ohm 6-2 kOhm 5-6 kOhm 4-7 kOhm 150 kOhm 2-2 kOhm 8-10 kOhm 1 Pole	1% 0.25% MF 5% 0.25% MF 5% 0.25% MF 5% 1025% MF		
R 152 R 153 R 154 R 155 R 156 R 157 R 158 R 160 R 160 R 160 R 160 R 167 R 168 R 169 R	57.11.3120 57.11.3479 57.11.3479 57.11.3120 57.11.3120 57.11.3120 57.11.3922 57.11.3573 57.11.3573 57.11.3573 57.11.3523 57.11.5225 57.88.4103 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320	4.7 Ohm 12 Ohm 8.2 kOhm 56 kOhm 47 kOhm 150 kOhm 22 KOhm 2 KOhm 1 Pole	1%, 0.25%, MF 1%		

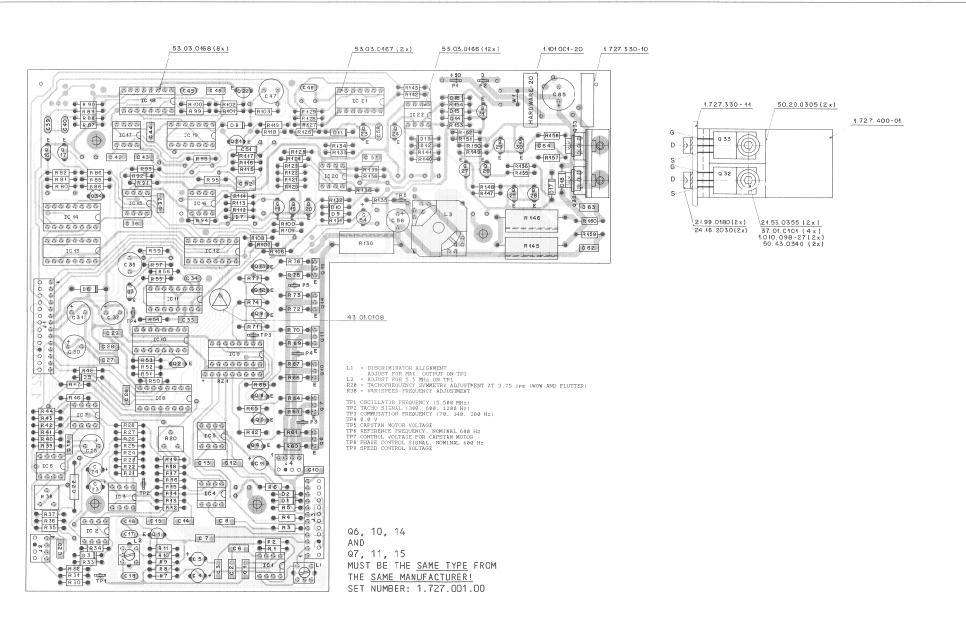






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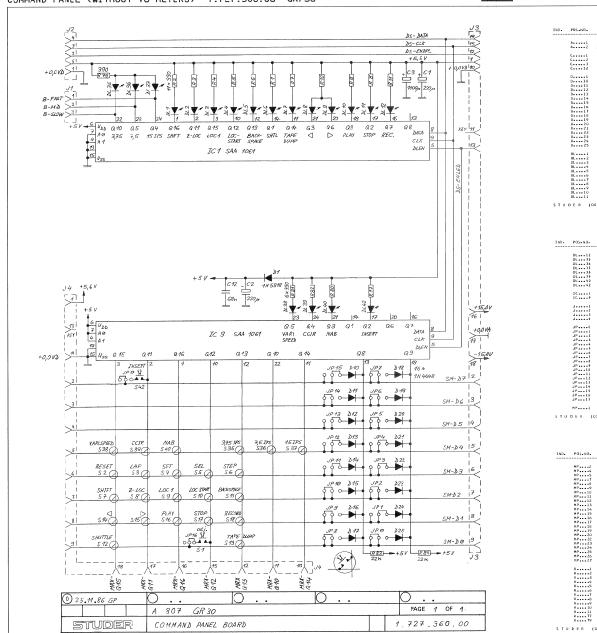
ND• P	05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAM
C	1	59.06.0102 59.06.0223	1 nF 22 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			MP7 MP8 MP9	50-20-0404 1-010-098-27 50-20-0305	2 pcs 2 pcs 2 pcs	Insulating pass through D6.0/ Distance socket D3.1/7.0 ¢ 2. Greased insulation for TD 220	3
C C	3	59.06.0473 59.22.6100 59.22.8229	47 nF 10 uF 2•2 uF	-20% 35 V EL -20% 50 V EL			MP10 MP11	1.727.335.10 1.727.331.01	1 pce 1 pce	No. label 5 ÷ 17	
Ċ	7	59.06.0223 59.06.0683 59.06.0222	22 nF 68 nF 2+2 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			MP12 MP13	43.01.0108 1.101.001.20	1 pce 1 pce	ESE label Hardware label -20	
C	10 11	59.06.0103 59.22.5220 59.06.0222	10 nF 22 uF 2•2 nF	10% 63 V PETP -20% 25 V EL 10% 63 V PETP			P • • • • • 1 P • • • • • 2 P • • • • 3	54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole	Tab Tab Tab	
C	13	59.06.0222 59.06.0683	2.2 nF 68 nF 220 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			P 4 P 5	54.02.0320 54.02.0320	l Pole l Pole	Tab Tab	
C	15	59.06.0224 59.34.5561 59.34.4151	560 pF 150 pF	5% 63 V CER 5% 63 V CER			0 · · · · · 2	50.03.0514 50.03.0340	BF 366 BC 337-25 BC 327-25	NPN NPN PNP	,
C	19	59.34.4101 59.06.0102 59.06.0103	100 pF 1 nF 10 nF	5% 63 V CER 10% 63 V PETP 10% 63 V PETP			Q4 Q5	50.03.0351 50.03.0351 50.03.0491	BC 327-25 BC 546 B	PNP NPN	
C	23	59.12.7182 59.22.8109 59.22.6100	1.8 nF 1 uF 10 uF	1% 63 V PS -150 +-60ppm/K -20% 50 V EL -20% 35 V EL			Q6 Q7 Q8	50.03.0749 50.03.0799 50.03.0351	8D 679 8D 680 8C 327-25	Darl. PNP (see	note 1) Phys note 1) Phys
C	25	59.22.5101 59.06.0102	100 uF 1 nF 68 nF	-20% 25 V EL 10% 63 V PETP 10% 63 V PETP			Q9 Q10 Q11	50.03.0491 50.03.0749 50.03.0799	BC 546 B BD 679 BD 680	NPN Darl. NPN (see Darl. PNP (see	note 1) Phys
C	27 28 29	59.06.0683 59.06.0683 59.06.0683	68 nF 68 nF	10% 63 V PETP 10% 63 V PETP			Q12 Q13	50.03.0351 50.03.0491	BC 327-25 BC 546 B	PNP NPN	
C	30	59.22.5101 59.22.5101 59.22.3221	100 uF 100 uF 220 uF	-20% 25 V EL -20% 25 V EL -20% 10 V EL			Q14 Q15 Q16	50.03.0749 50.03.0799 50.03.0436	BD 679 BD 680 BC 237 B	Oari. PNP (see 8C 547 B BC 550 B NPN	note 1) Ph: note 1) Ph:
C	33	59.06.5682 59.06.0222 59.05.1223	6.8 nF 2.2 nF 22 nF	5% 63 V PETP 10% 63 V PETP 1% 63 V PP			Q18 Q19	50.03.0436 50.03.0340 50.03.0340	BC 237 B BC 337-25 BC 337-25	BC 547 B BC 550 B NPN NPN NPN	
C	35	59.06.0332 59.06.5103	3.3 nF 10 nF	10% 63 V PETP 5% 63 V PETP			Q20 Q21	50.03.0340 50.03.0340 50.03.0351	BC 337-25 BC 337-25 BC 327-25	NPN NPN PNP	
C	40	59.34.4181 59.34.4181	180 pF 180 pF	5% 63 V CER 5% 63 V CER			Q • • • • 22 Q • • • • 23	50.03.0340	BC 337-25	NPN	
T U D	ER (00	) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.335.20	PAGE 1	STU	DER (C	00) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.33	5.20 PAGE
ND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAI
	C42 C43	59.06.0332 59.06.0103	3.3 nF 10 nF	10% 63 V PETP 10% 63 V PETP			Q24 Q25	50+03+0515 50+03+0626	BC 307 B BC 640	BC 557 B BC 560 B PNP PNP	
	C • • • • 44 C • • • • 45	59.06.0332 59.06.0222 59.06.5682	3.3 nF 2.2 nF 6.8 nF	10% 63 V PETP 10% 63 V PETP 5% 63 V PETP			Q26 Q27 Q28	50.03.0551 50.03.0492 50.03.0491	BC 639 BC 556 B BC 546 B	NPN PNP NPN	
	C • • • • 46 C • • • • 47 C • • • • 48	59.05.1223 59.34.4331	22 nF 330 pF	1% 63 V PP 5% 63 V CER	Ph		Q29 Q30	50.03.0626 50.03.0551 50.03.0491	BC 640 BC 639 BC 546 B	PNP NPN NPN	
	C • • • • 51 C • • • • 53 C • • • • 54	59.26.5229 59.26.0680 59.22.6100	2•2 uF 68 uF 10 uF	20% 25 V SAL 20% 6.3 V SAL -20% 35 V EL	Ph		Q31 Q32 Q33	50.03.1502 50.03.1552	IRF 522 IRF 9532	MTP 8N10 Power FET N-Chanr MTP 8P10 Power FET P-Chanr	nel IR.
	C • • • • 56 C • • • • 57 C • • • • 58	59.22.8100 59.06.0683 59.34.5561	10 uF 68 nF 560 pF	-20% 63 V EL 10% 63 V PETP 5% 63 V CER			Q 35 Q 36	50.03.0515 50.03.0436 50.03.0329	BC 307 B BC 237 B WP 146	BC 557 B BC 560 B PNP BC 547 B BC 550 B NPN p-ch FET	
	C • • • • 62	59.06.0222 59.06.0222	2 • 2 nF 2 • 2 nF 68 nF	10% 63 V PETP 10% 63 V PETP 10% 63 V PETP			Q37 R1	50.03.0436 57.11.3681	BC 237 B 680 Ohm	BC 547 B BC 550 B NPN 1%, 0.25W, MF	
	C 64 C 65	59.06.0683 59.22.8221	220 uF	-20% 63 V EL			R • • • • • 2 R • • • • • 3	57.11.3102 57.11.3472	1 kOhm 4.7 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	D2 D3	50.04.0125 50.04.0125 50.04.1101	1N4448 1N4448 3.9 V	50 V 50 V 5% 0.44 W			R 4 R 5 R 6	57.11.3472 57.11.3472 57.11.3101	4.7 kOhm 100 Ohm	1%, 0.25W, MF 1%, 0.25W, MF	
	D5 D6 D7	50.04.1112 50.04.0512 50.04.1112	5.1 V 1N5818 5.1 V	5% 0.4 W 30 V 1N5819 Schottky 5% 0.4 W			R • • • • • 8 R • • • • • 9	57.11.3121 57.11.3121 57.11.3103	120 Ohm 120 Ohm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	D8 D9 D10	50.04.0134 50.04.0125 50.04.0125	1N3595 DHD 1N4448 1N4448	150 V I rev <1 nA a 125 V 50 V 50 V	Fc		R10 R11 R12	57•11•3103 57•11•3102 57•11•3223	10 kOhm 1 kOhm 22 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	D11 D12	50.04.0127 50.04.0125	BAS 40-02 1N4448	30 V BAT 85. BAT 42 Schottky 50 V	Sie,Ph		R13 R14	57.11.3103 57.11.3103	10 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	D13 D14 D15	50.04.0125 50.04.0125 50.04.0125	1 N4448 1 N4448 1 N4448	50 V 50 V 50 V			R • • • • 15 R • • • • 16 R • • • • 17	57.11.3103 57.11.3562 57.11.3682	5.6 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	
	D16 D17 D18	50.04.0125 50.04.0508 50.04.0508	1N4448 1N4935 1N4935	50 V 200 V 1N4936 RG10 200 V 1N4936 RG10	Mot+GI Mot+GI		R18 R19 R20	57.11.3822 57.11.3822 58.01.8501	8.2 kOhm 8.2 kOhm 500 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 10%, 0.5 W, CERMET, line Trim	npot.
	101	50.11.0137	T6A 129	FM-ZF-Amp.,Discriminator	Ph		R • • • • 21 R • • • • 22	57.11.3273 57.11.3103	27 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	
TUD	ER (00	)) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.335.20	PAGE 2	STU	DER (	00) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.33	35 • 20 PAGE
ND.	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA
	102	50.09.0107 50.09.0101	RC 4559 LF 353 N	uPC 4559 Dual Op.Amp. TL 072 CP Dual Op.Amp. Bi-JFET	Ra•NEC NS•TI		R23 R24	57.11.3102 57.11.3105	l kOhm l MOhm	1%, 0.25W, MF 1%, 0.25W, MF	
	IC 4 IC 5	50.05.0283 50.05.0283	LM 393 N LM 393 N	LM 393 P Dual Comp. LM 393 P Dual Comp.	NS.TI NS.TI		R 25 R 26	57-11-3103 57-11-3103	10 kOhm 10 kOhm	1% 0.25W MF 1% 0.25W MF 1% 0.25W MF	
	1C6 1C7 IC8	50.05.0158 50.05.0283 50.17.1153	NE 555 N LM 393 N 74 HC 153	LM 393 P Dual Comp	Sig+NS NS+TI		R • • • • 27 R • • • • 28 R • • • • 30	57.11.3103 57.11.3103 57.11.3393	10 kOhm 10 kOhm 39 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	
	IC 9 IC 10 IC 11	50.05.0206 50.07.0526 50.07.0538	4526 4538	Capstan motor comm. Ctl. 1.727.33	1.20 St Ph.Mot		R 32 R 33	57.11.3242 57.11.3332 57.11.3822	2.4 kOhm 3.3 kOhm 8.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	IC12 IC13	50.07.0018 50.07.0526	••4094•• ••4526•• ••4052••		-		R 34 R 35 R 36	57.11.3152 57.11.3221 57.11.3333	1.5 kOhm 220 Ohm 33 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	IC14 IC15 IC16	50.07.0024 50.09.0101 50.09.0107	LF 353 N RC 4559	TL 072 CP Dual Op.Amp. Bi-JFET uPC 4559 Dual Op.Amp.	NS+TI Ra+NEC		R • • • • 37 R • • • • 38	57.11.3133 58.01.8103	13 kOhm 10 kOhm 10 kOhm	1%, 0.25W, MF 10%, 0.5 W, CERMET, lin. Trim 1%, 0.25W, MF	mpot.
	IC17 IC18 IC19	50.07.0538 50.07.0066	LF 353 N 4538	TL 072 CP Dual Op.Amp. Bi-JFET	NS+TI Ph+Mot		R • • • • 40 R • • • • 41	57.11.3103 57.11.3103 57.11.3103	10 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	
	IC20 IC21 IC22	50.09.0107 50.17.1000 50.05.0283	RC 4559 74 HC 00 LM 393 N	uPC 4559 Dual Op.Amp.  LM 393 P Dual Comp.	Ra•NEC NS•TI		R • • • • 42 R • • • • 43 R • • • • 44	57.11.3103 57.11.3682 57.11.3332	10 kOhm 6.8 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	J1	54.01.0293	14 Pole	CIS socket strip	AMP AMP		R 46 R 47 R 48	57.11.3103 57.11.3472 57.11.3222	10 k0hm 4.7 k0hm 2.2 k0hm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	J2 J3 J4	54.01.0241 54.01.0215 54.01.0241	4 Pole 12 Pole 4 Pole	CIS socket strip CIS socket strip CIS socket strip	AMP AMP		R • • • • 50 R • • • • 51	57.11.3104 57.11.3562	100 kOhm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF	
	L •••••1 L •••••2	1.022.222.00	16 uH 16 uH	HF-Coil HF-Coil	St St		R 52 R 53 R 54	57.11.3153 57.11.3153 57.11.3562	15 kOhm 15 kOhm 5•6 kOhm	1%, 0.25%, ME 1%, 0.25%, ME 1%, 0.25%, ME	
	L3	1.022.251.00	196 uH 1 pce	Filter Coil PC Board	St St		R • • • • 55 R • • • • 56 R • • • • 57	57.11.3562 57.11.3562 57.11.3221	5.6 kOhm 5.6 kOhm 220 Ohm	1%, 0.25W; MF 1%, 0.25W; MF 1%, 0.25W; MF	
	MP2 MP3	1.727.400.01	1 pce 2 pcs	Heatsink M3 ≠ 5 Cross recessed oval head so	St crew		R • • • • 58 R • • • • 59	57.11.5475 57.11.3104	4.7 MOhm 100 kOhm	5%, 0.25W, MF 1%, 0.25W, MF	
	MP 4 MP 5 MP 6	21.53.0355 24.16.2030 37.01.0101	2 pcs 2 pcs 4 pcs	M3 * 8 Hexagon socket head cap sc Serrat lock washer D3•2/6•0 Disc spring D3•2/8•0 * 0-3	rew		R • • • • 60 R • • • • 61 R • • • • 62	57.11.3102 57.11.3331 57.11.3392	1 k0hm 330 Ohm 3∙9 k∩hm	1%, 0.25W+ ME 1%, 0.25W+ ME 1%. 0.25W+ ME	



	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	NT MANU
	R 63 R 64 R 65 R 69 R 69 R 70 R 71 R 72 R 74 R 74 R 74 R 74 R 74 R 74 R 74 R 74	57.11.3222 57.11.3152 57.11.3322 57.11.3322 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3325 57.11.3327	2-2 kOhm 1-5 kOhm 3-3 kOhm 3-9 kOhm 1-5 kOhm 3-1 kOhm 3-1 kOhm 3-1 kOhm 3-1 kOhm 3-1 kOhm 3-1 kOhm 3-2 kOhm 3-3 kOhm 3-1 kOhm 3-1 kOhm 3-2 kOhm 1-2 kOhm 1-3 kOhm 1-4 kOhm 1-5 kOhm 1-5 kOhm 1-6 kOhm 1-7 kOhm 1-8 kOhm 1-9 kOhm 1-1	12, 0.25W, MF 12, 0.25W, MF 12, 0.25W, MF 11, 0.25W, MF 12, 0.25W, MF			H1  XIC2  XIC3  XIC3  XIC4  XIC5  XIC5  XIC5  XIC10  XIC12  XIC12  XIC12  XIC12  XIC12	1.010.321.64  31.03.0166  33.03.0166  33.03.0166  33.03.0166  33.03.0166  33.03.0166  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168  33.03.0168	8 Pole 8 Pole 8 Pole 8 Pole 8 Pole 8 Pole 10 Pole	Wire Bridge  IC socket  IC socket	
τυ	K*** 102	57.11.3562 ) 88/03/21 GP	5.6 KONM	1%, 0.25W, MF	O PAGE 7	STU	DER (O	D) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.72	27.335.20 PAGE :
€D .	P05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	1ND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	NT MANU
	R103 R106 R107 R108	57-11-3104 57-11-3102 57-11-3822 57-11-3822	100 kOhm 1 kOhm 8•2 kOhm 8•2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		Note	l - For exc respect manufac	ive the PNP - Tr	lutter valu	es at 3.75 ips the NPN hould be from the same	
	R109 R110 R111	57.11.3472 57.11.3472 57.11.3681 57.11.3273	4.7 kOhm 4.7 kOhm 680 Ohm 27 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		MATER	IALS: CER	= Ceramic•	EL = Elect PS = Polys	rolytic, MF = Metalfilm tyrol, PP = Polypropylen	
	R112 R113 R114 R115	57-11-3273 57-11-3273 57-11-3124 57-11-3105	27 kOhm 120 kOhm 1 MOhm	1%, 0.25W+ MF 1%, 0.25W+ MF 1%+ 0.25W+ MF		MANUF	G I	P = AMP Incorpor = Fairchild = General Inst	ruments	Ph = Philips Ra = Raytheon SGS = SGS/Ates	
	R116 R117 R118 R119	57.11.3332 57.11.3682 57.11.3561 57.11.3103	3.3 kOhm 6.8 kOhm 560 Ohm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			M c N E	= Internationa t = Motorola C = Nippon Elect = National Sen	ric Corp.	Sie = Siemens Sig = Signetics St = Studer TI = Texas Instruments	
	R • • • 120 R • • • 121 R • • • 122	57.11.3561 57.11.3181 57.11.3122	560 Ohm 180 Ohm 1•2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R123 R124 R125 R126	57.11.3911 57.11.3333 57.11.3101 57.11.3472	910 Ohm 33 kOhm 100 Ohm 4.7 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF							
	R127 R128 R129 R130	57.11.3102 57.11.3102 57.11.4000 57.56.5228	1 k0hm 1 k0hm 0 Ohm 0•22 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 5%, 4.0 W, Wire							
	R * * * 131 R * * * 132 R * * * 133 R * * * 134	57.11.3102 57.11.3332 57.11.3105 57.11.3222	1 k0hm 3.3 k0hm 1 M0hm 2.2 k0hm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R135 R136 R137	57.11.3152 57.11.3332 57.11.3154	1.5 kOhm 3.3 kOhm 150 kOhm 12 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R139 R140 R141	57.11.3123 57.11.3102 57.11.3122 57.11.3472	1 kOhm 1 kOhm 1-2 kOhm 4-7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		ORIG	88/03/21				
τυ	D E R (00	) 88/03/21 GP	CAPSTAN	MOTOR CONTROL HS 1.727.335.	20 PAGE 8	SΤU	D E R (0	0) 88/03/21 GP	CAPSTAP	MOTOR CONTROL HS 1.7	27.335.20 PAGE
o.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.						
	R142 R143 R145	57.11.3102 57.11.3332 57.56.5108 57.56.5108	1 kOhm 3-3 kOhm 0-1 Ohm 0-1 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 10%, 4.0 W, Wire 10%, 4.0 W, Wire							
	R146 R147 R148 R149	57•11•3152 57•11•3562 57•11•3562	1.5 kOhm 5.6 kOhm 5.6 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R150 R151 R152 R153	57.11.3392 57.11.3392 57.11.3102 57.11.3472	1.5 kOhm 3.9 kOhm 1 kOhm 4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R154 R155 R156	57.11.3152 57.11.3120 57.11.3120	1.5 kOhm 12 Ohm 12 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R157 R158 R159 R160	57.11.3479 57.11.3479 57.11.3120 57.11.3120	4.7 Ohm 4.7 Ohm 12 Ohm 12 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R161 R162 R164 R165	57-11-3822 57-11-3563 57-11-3473 57-11-3154	8.2 kOhm 56 kOhm 47 kOhm 150 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF							
	R166 R167	57.11.3223 57.11.5225 57.88.4103	22 kOhm 2•2 MOhm 8*10 kOhm	1%, 0.25W, MF 5%, 0.25W, MF 5%, Single Line							
	TP•••1 TP•••2	54.02.0320 54.02.0320	l Pole l Pole	Tab Tab							
	TP5 TP6	54.02.0320 54.02.0320 54.02.0320 54.02.0320	1 Pole 1 Pole 1 Pole 1 Pole	Tab Tab Tab Tab							
	TP 7	54.02.0320	1 Pole	Tab							

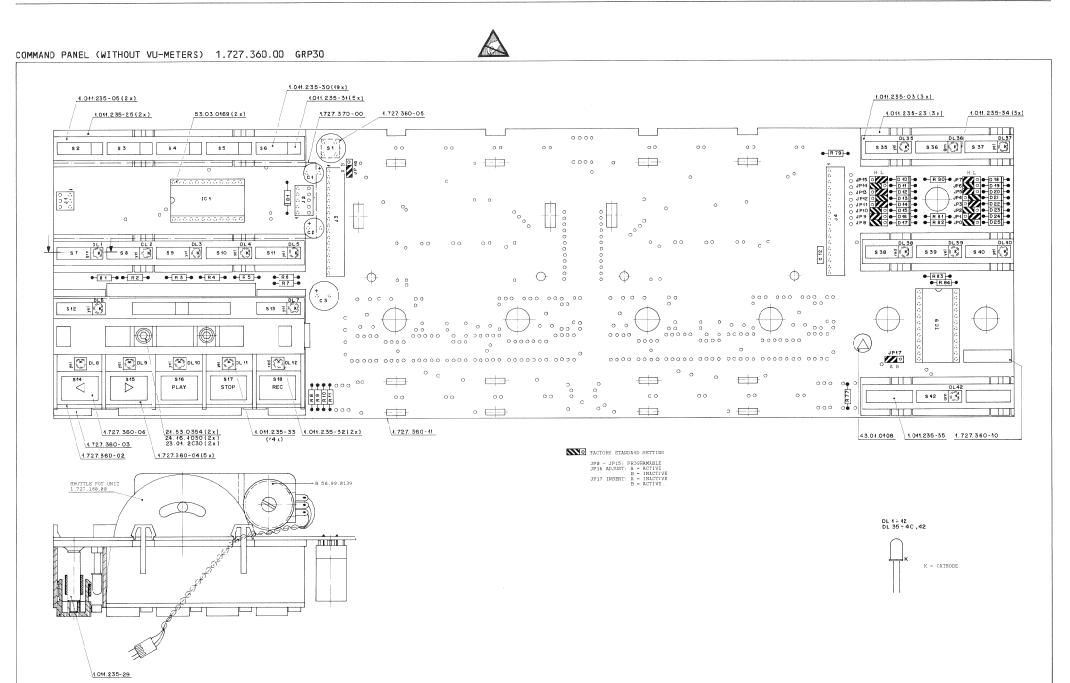


#### COMMAND PANEL (WITHOUT VU-METERS) 1.727.360.00 GRP30



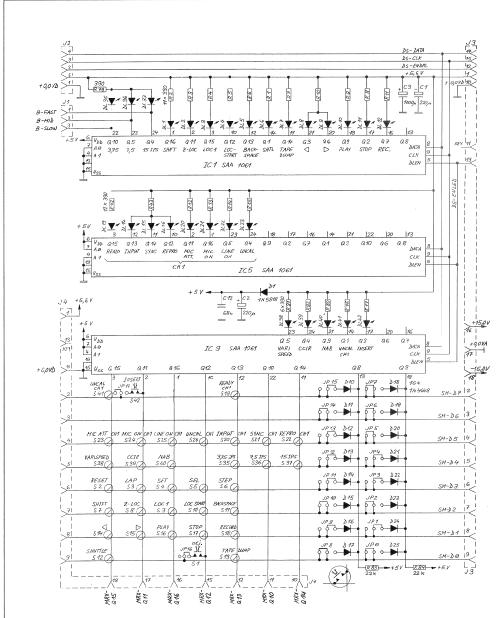
IND. POS.NO. PARY NO. VALUE SPECIFICATIONS / ECUIVALENT	MANUF.	IND.	POS+ND+	PART NO.	VALUE	SPECIFICATIONS / EQ	UI VALENT NA NUF.
A1 1-727-370-00 Display Board A2 1-727-130-00 Shuttle Control			R80 R81 R82	57-11-+391 57-11-+391 57-11-+391 57-11-+223	390 Ohe 390 Ohe 390 Ohe 22 kOhe	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
C1 59-22-3221 220 uF0% 10 V LL C2 59-22-3221 220 uF0% 10 V LL C3 59-22-3102 1000 uF -20% 10 V LL C12 59-00-0083 08 nF 102 50 V EEF			R83 R84	57.11.4223 57.11.4223 55.15.0130	22 kOhn 22 kOhn	2%, 0.25%, MF 2%, 0.25%, MF Push button Switch	1111
01 50-04-0512 1N5818 30 V Schottky			X1C 1 X1C 9	53.03.0169 53.03.0169	24-Pole 24-Pole	IC Socket IC Socket	***
01 50.0-0512 104813 30 V chetsty  11 50.0-0512 104813 30 V chetsty  11 50.0-0512 104413 50 V 11  1			A1C****	33.03.0101	24-1016	TO SOCKED	
014 50-04-0125 1N4448 50 V \$1 015 50-04-0125 1N4448 50 V \$1 015 50-04-0125 1N4448 50 V \$1							
016 50-04-0125 1N4448 50 V 31 018 50-04-0125 1N4448 50 V 31 018 50-04-0125 1N4448 50 V 31							
017 36-04-0125 1N4448 50 V 31 021 56-04-0125 1N4448 50 V 31 021 56-04-0125 1N4448 50 V 31 022 56-04-0125 1N4448 50 V 31							
01 50.0-0.512 184848 30 V schettky 010 50.0-0.512 184848 30 V schettky 010 50.0-0.512 184448 50 V si 012 50.0-0.125 184448 50 V si 012 50.0-0.125 184448 50 V si 013 50.0-0.125 184448 50 V si 013 50.0-0.125 184448 50 V si 014 50.0-0.125 184448 50 V si 016 50.0-0.125 184448 50 V si 016 50.0-0.125 184448 50 V si 016 50.0-0.125 18448 50 V si 016 50.0-0.125 18448 50 V si 017 50.0-0.125 18448 50 V si 018 50.0-0.125 18448 50 V si							
	61 61						
RL 2 \$6.04.2500 MV9352 LED yel 0.95 mm RL 3 \$6.04.2500 MV9352 LED yel 0.95 mm RL 4 \$6.04.2500 MV9352 LED yel 0.95 mm RL 5 \$6.04.2500 MV9352 LED yel 0.95 mm RL 5 \$6.04.2500 MV9352 LED yel 0.95 mm RL 6 \$6.04.2500 MV9352 LED yel 0.95 mm RL 7 \$6.04.2500 MV9352 LED yel 0.95 mm	61 61 61	55)-5		lectrolytic, PE	TD-3-14-		
016 56.04-2500 MV5352 LED yel D=5 mm 017 56.04-2500 MV5352 LED yel D=5 mm 019 56.04-2500 MV5352 LED yel D=5 mm 010 56.04-2500 MV5352 LED yel D=5 mm 0110 56.04-2500 MV5352 LED yel D=5 mm	61 61 61	MF=Meta MANUFAC	TURER: AMP	erm=Pot. Cermet , GI=General In Philips, Ra=Ray	strument. I	, sr-stricus,	
011	61 61	ORIG 46	/11/25				
S T U D E R (00) 86/11/25 GP COMMAND PANEL 80ARD 1-727-360-00	PAGE 1	STU	ER (90)	) 86/11/25 GP	COMMAND	PANEL BOARD	1.727.360.00 PAGE 4
1NO. POS.NO. PART NO. YALUE SPECIFICATIONS / EQUIVALENT	MANUF. GI						
1112 50-04-2115 W3752 LEB red D-5 mm  1135 50-04-2105 W7352 LEB red D-5 mm  1131 50-04-2105 W7352 LEB red D-5 mm  1131 50-04-215 W3752 LEB red D-5 mm  1131 50-04-215 W3752 LEB red D-5 mm  1131 50-04-215 W3752 LEB red D-5 mm  1140 50-04-215 W3752 LEB red D-5 mm  1140 50-04-215 W3752 LEB red D-5 mm  1140 50-04-215 W3752 LEB red D-5 mm	GI GI						
DL38 50.04.215 HV5752 LED red D=5 mm DL39 50.04.2500 HV5352 LED yel D=5 mm DL40 50.04.2500 HV5352 LED yel D=5 mm	GI GI						
DL42 50.01.2501 HV5452 LED grn D=5 mm	GI Ph Ph						
IC  50-13-0106 SAA 1061 Orivor IC9 50-13-0106 SAA 1061 Orivor J( 54-01-0287 3-Pole CIS Socket Strip							
J2 34.01.0288 5-Pole CIS Socket Strip J3 54.01.0228 18-Pole CIS Socket Strip J4 54.01.0228 18-Pole CIS Socket Strip	AMP AMP AMP						
180 54-01-0021 Bridge							
June 10 20 40 10 10 10 10 10 10 10 10 10 10 10 10 10							
JP6 54.01.0021 8ridge JP7 54.01.0021 8ridge							
JP 3 5.4 (1.002)							
uP11 9x.01.0021 bridge JP12 9x.01.0021 bridge JP13 9x.01.0021 bridge JP13 9x.01.0021 bridge JP15 9x.01.0021 bridge							
MP) 54.01.0020 54 pcs Contact Pin							
\$ T U D E k (OC) 85/11/25 GP COMMAND PANEL BOARD 1.727.360.00	PAGE 2						
IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.						
MP2 1:011-235-03 3 pts Push button case 34							
NP2   1011.235.03   3 pcs							
MP8 1-011-235-29 24 pcs 801t MP9 1-011-235-30 19 pcs 9ush betton 1405 MP10 1-011-235-31 5 pcs 9unny calctte							
nr11 1-011-255-32							
No.							
MP18 1-727-360-10 1 pcs Push button Adj- MP18 1-727-360-10 1 pcs No-Label MP19 1-727-360-11 1 pcs Command Panel PC3							
MP20 13.03.0221 19 pts 2-pole LED Socket NP22 11.53.0354 2 pts Hoxagon sockat head cap screw M396 NP23 13.01.2032 2 pts Masher NP24 (4-16-1030 2 pts Fin washer							
## 15 1.127.360.03   pre- pre- pre- pre- pre- pre- pre- pre-	REC)						
MP27 1-011-235-35 2 pts Dummy push button 1975  R1 57-11-4391 390 0hm 2%, 0-25N, MF  R2 57-11-4391 390 0hm 2%, 0-25N, MF							
R							
R6 57-11-4391 390 0hm 2%, 0.25M, MF R7 57-11-4391 390 0hm 2%, 0.25M, MF R8 57-11-3391 390 0hm 2%, 0.25M, MF							
R9 57.11.4391 390 0hm 2% 0.25M MF R10 57.11.4391 390 0hm 2% 0.25M MF R11 57.11.4391 390 0hm 2% 0.25M MF							
R79 57.11.4391 390 0hm 2%, 0.25W, MF							
S T U D E R (O)) 86/11/25 G/ COMMAND PANEL BOARD 1.727.360.00	PAGE 3						

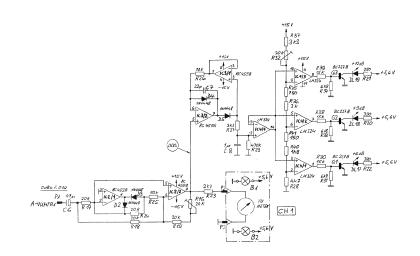
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COMMAND PANEL (1 VU) 1.727.361.00 GRP30



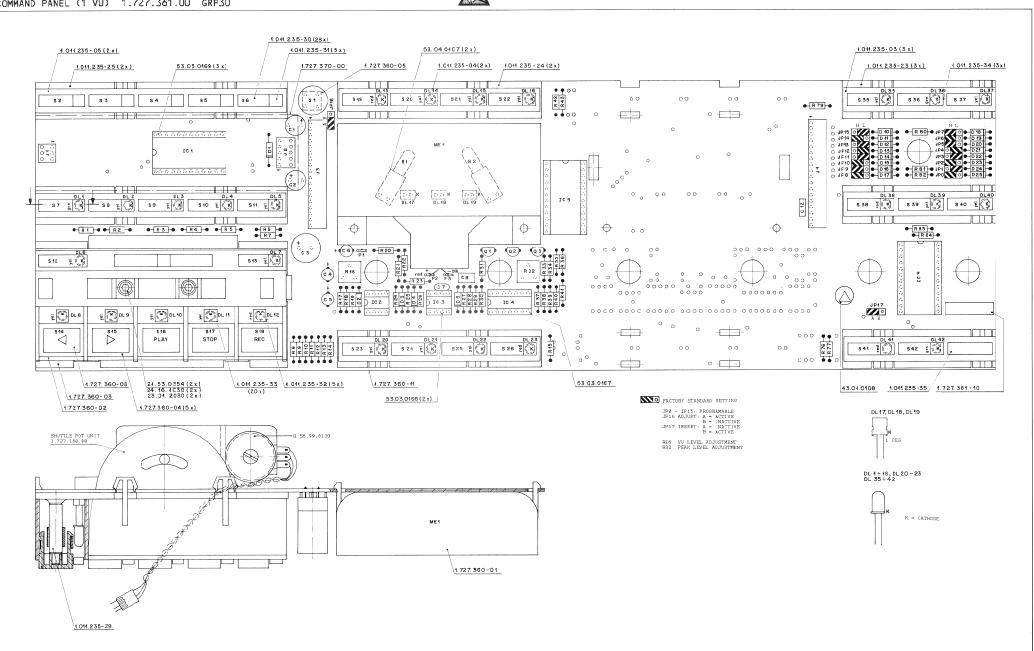


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1 25.11.86 GP	0	0	0	0
	A 807 GR 30			PAGE 2 OF 2
STUDER	COMMAND PAN	EL BOARD 1	IU SC	1.727.361.00

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COMMAND PANEL (1 VU) 1.727.361.00 GRP30



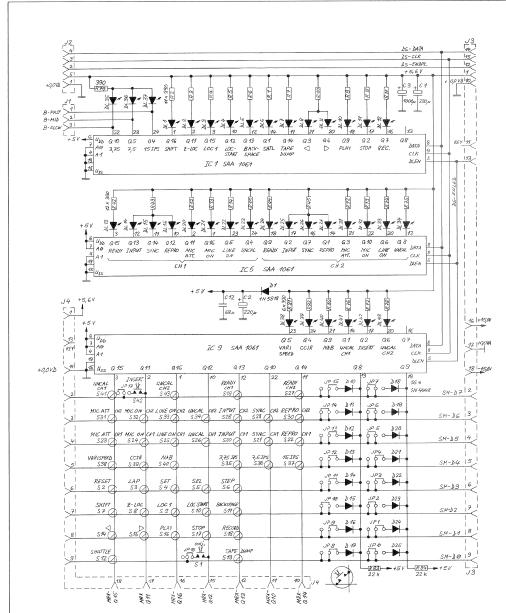


## COMMAND PANEL (1 VU) 1.727.361.00 GRP30

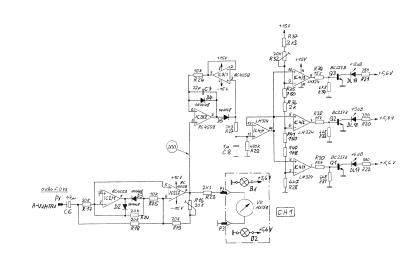
NO. POS.NO	D. PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	NT MA NUF.	I NO •	P05 • N0 •	PART NO+	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
A			Display Board Shuttle Control			MP10 MP11 MP12	1.011.235.31 1.011.235.32 1.011.235.33	5 pcs 5 pcs 20 pcs	Dummy calotte Calotte red Calotte yel	
B • • • •		6 V 6 V	0.03 A Lamp 0.03 A Lamp			MP13 MP14	1.011.235.34	3 pcs 1 pcs	Calotte grn Push button case with Shuttle	
C	.2 59.22.3221	220 uF 220 uF	-20% 10 V EL -20% 10 V EL			MP15 MP16 MP17	1.727.360.03 1.727.360.04 1.727.360.05	1 pcs 5 pcs 1 pcs	Conductive rubber with Shuttle Push button 19*14 Push button Adja	
C	.4 59.22.5220 .5 59.22.5220	1000 uF 22 uF 22 uF	-20% 10 V EL -20% 25 V EL -20% 25 V EL			MP18 MP19 MP20	1.727.361.10 1.727.360.11 53.03.0221	1 pcs 1 pcs 31 pcs	No. Label Command Panel PCB 2-pole LED Socket L-LST Command Panel Board	
C C	.7 59.34.2220 .8 59.06.0105	47 uF 22 pF 1 uF	-20% 10 V EL 10% 50 V CER 10% 50 V PETP			MP21 MP23	1.727.362.93 21.53.0354 23.01.2032	1 pcs 2 pcs 2 pcs	Hexagon socket head cap screw Washer Fin washer	M3≎6
C	.1 50.04.0512	68 nF 1N5818	10% 50 V PETP			MP24 MP25 MP26	24.16.1030 43.01.0108 1.727.360.06	2 pcs 1 pcs 1 pcs	ESE Warning label Push button labels (<,>,PLAY, Dummy push button 19#5	TOP «REC)
D D	•3 50.04.0125 •4 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			MP27 P1 P2	1.011.235.35 54.02.0320 54.02.0320	1 pcs	Plug 2-8*0-8 Plug 2-8*0-8	A) A)
D D	10 50.04.0125 11 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			P 3	54.02.0320	BC 2 3 7 B	Plug 2-8=0-8 BC547B, BC550B NPN	AI
D	13 50.04.0125 14 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			Q 2 Q 3	50.03.0436 50.03.0436	BC2378 BC2378	BC5478+ BC5508 NPN BC5478+ BC5508 NPN	
D D	16 50.04.0125 17 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R • • • • • 2 R • • • • • 3	57.11.4391 57.11.4391 57.11.4391	390 Dhm 390 Dhm 390 Dhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
D D	19 50.04.0125 20 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R5 R6	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
D D	22 50.04.0125 23 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R 7 R 8 R 9	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
D	25 50.04.0125	1N4448	50 V SI	27.361.00 PAGE 1	5 T II	R10	57-11-4391 0) 86/09/23 GP	390 Ohm	2%, 0.25W, MF	.00 PAGE
10068	(00) 86/09/23 GP	COMPAND	PANCE BOARD 140 1.00	27.301.00	3.0	0 E K (0	07 657 637 23 61	COMMAND	Teresos	1700
ND. POS.N	O. PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	NT MANUF.		P05.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
DL DL	·2 50·04·2500	MV5452 MV5352 MV5352	LED grn D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI GI		R11 R12 R13	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
DL DL	•4 50•04•2500 •5 50•04•2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R14 R15 R16	57-11-4391 57-11-4391 58-01-8203	390 Ohm 390 Ohm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 10%, 0.5 W, PCerm	
DL	.7 50.04.2500 .8 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	G I G I		R17 R18 R19	57.11.3203 57.11.3203 57.11.3203	20 kOhm 20 kOhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
DL DL	10 50.04.2500 11 50.04.2500	MV 5352 MV 5352 MV 5752	LED yel 0=5 mm LED yel 0=5 mm LED red 0=5 mm	61 61 61		R • • • • 20 R • • • • 21 R • • • • 22	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
DL DL	13 50.04.2115 14 50.04.2500	MV5752 MV5352 MV5352	LED red D=5 mm LED yel D=5 mm LED yel D=5 mm	61 61 61		R • • • • 23 R • • • • 24 R • • • • 25	57.11.4272 57.11.3203 57.11.4103	2.7 kühm 20 kühm 10 kühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
DL DL	16 50.04.2500 17 50.04.2119	MV5352 MV57124 HV57124	LED yel D=5 mm LED red 6.35÷3.81 LED red 6.35÷3.81	G I G I G I		R 26 R 27 R 28	57.11.4103 57.11.4332 57.11.3472	10 k0hm 3.3 k0hm 4.7 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF	
DL DL	19 50.04.2119 20 50.04.2500	MV57124 MV5352 MV5352	LED red 6.35*3.81 LED yel D=5 mm LED yel D=5 mm	61 61 61		R 29 R 30 R 31	57.11.4474 57.11.4153 57.11.4682	470 k0hm 15 k0hm 6•8 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
DL DL	23 50.04.2115	MV5352 MV5752 MV5352	LED yel D=5 mm LED red D=5 mm LED yel D=5 mm	G I G I G I		R 32 R 33 R 34	58.01.8203 57.11.4682 57.11.4682	20 kühm 6.8 kühm 6.8 kühm	10%, 0.5 W. PCerm 2%, 0.25W, MF 2%, 0.25W, MF	
DL DL	36 50.04.2501 37 50.04.2500	MV 5452 MV 5352 MV 5752	LED grn D=5 mm LED yel D=5 mm LED red D=5 mm	G I G I G I		R 35 R 36 R 37	57.11.3751 57.11.3202 57.11.4332	750 Ohm 2 kOhm 3.3 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF	
DL DL	40 50.04.2500	MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	GI GI GI		R 38 R 39 R 40	57.11.4153 57.11.4153 57.11.3182	15 kOhm 15 kOhm 1•8 kOhm	2%, 0.25Ws MF 2%, 0.25Ws MF 1%, 0.25Ws MF	
DL	.1 50.13.0106	MV5452 SAA 1061	LED grn D=5 mm Driver	G I Ph		R 42 R 43	57.11.4151 57.11.4391 57.11.4391	150 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
IC IC	•3 50•09•0107	RC 4559 RC 4559 LM324	Dual Op. Amp. Dual Op. Amp. Quad Op. Amp.	Ra R∋ NS•Mot		R • • • • 76 R • • • • 77 R • • • • 79	57-11-4391 57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W; MF 2%, 0.25W; MF 2%, 0.25W; MF	
IC	•5 50•13•0106 (00) 86/09/23 GP	SAA 1061 COMMAND	Oriver	Ph '27•361•00 PAGE 2	STU	R80	57.11.4391 00) 86/09/23 GP	390 Ohm COMMAND F	2%, 0.25W, MF PANEL BOARD 1VU 1.727.36	1.00 PAGE
ND. POS.	ND. PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	ENT MANUF.	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA
IC	1 54.01.0287	SAA 1061 3-Pole	Driver CIS Socket Strip	Ph AMP		R * * * * 81 R * * * * 82 R * * * * 83	57•11•4391 57•11•4391 57•11•4223	390 Ohm 390 Ohm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
J J J	54.01.0288 54.01.0228	5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP		R 84 S 1	57•11•4223 55•15•0130	22 kOhm	2%, 0.25W, MF Push button Switch	
JP	0 54.01.0021 1 54.01.0021		Bridge Bridge			XB1 XB2	53-04-0107 53-04-0107		Lamp holder Lamp holder	
JP JP JP	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			xIC1 xIC2	53.03.0169 53.03.0166	24-Pole 8-Pole	IC Socket IC Socket	
JP JP JP	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			XIC3 XIC4 XIC5	53.03.0166 53.03.0167 53.03.0169	8-Pole 14-Pole 24-Pole	IC Socket IC Socket IC Socket	
JP JP JP	8 54.01.0021 9 54.01.0021 .10 54.01.0021		Bridge Bridge Bridge			XIC9	53.03.0169	24-Pole	IC Socket	
JP JP	•11 54.01.0021 •12 54.01.0021 •13 54.01.0021		Bridge Bridge Bridge							
JP JP JP	.14 54.01.0021 .15 54.01.0021 .16 54.01.0021		Bridge Bridge Bridge							
JP ME	.17 54.01.0021		Bridge VU Meter							
		54 pcs 3 pcs	Contact Pin Push button case 3¢							
MP	••2 1•011•235•03							DETR-Rolvorto	- CI-Cilican	
MP MP MP	4 1.011.235.04	2 pcs 2 pcs 3 pcs	Push button case 4* Push button case 5≠ Conductive rubber 3÷		MF = M	etal Film,	=Electrolytic. F PCerm=Pot. Cerms	et,		
MP	3 1.011.235.04 4 1.011.235.05 5 1.011.235.23 6 1.011.235.24 7 1.011.235.25	2 pcs	Push button case 5*		MF=Me MANU!	etal Film, FACTURER: A	PCerm≃Pot. Cerme MP, GI-General :	et, Instrument, I	TT, Mot-Motorola, h=Philips, Ra=Raytheon	

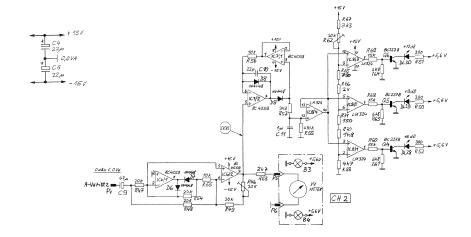






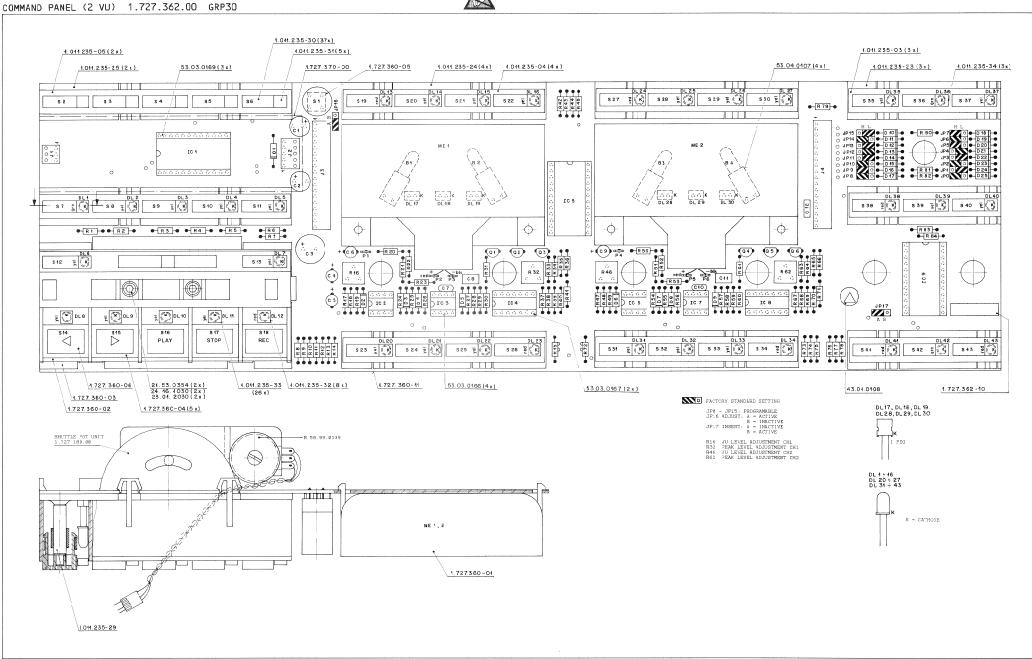
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	A 807 GR 30				PAGE 2 OF 2
STUDER	COMMAND PANA	EL BOARD 2	2 VU	SC 1	.727.362.00







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#### COMMAND PANEL (2 VU) 1.727.362.00 GRP30

DS•NO•		VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.			PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAN
••••2	1.727.180.00	6 V	Shuttle Control			JP 6 JP 7	54.01.0021 54.01.0021		Bridge Bridge Bridge
••••3	51.02.0144 51.02.0144	6 V 6 V	0.03 A Lamp 0.03 A Lamp			JP9 JP10	54.01.0021 54.01.0021		Bridge Bridge Bridge
1	59.22.3221	220 uF	-20% 10 V EL			JP *** 12 JP *** 13	54.01.0021 54.01.0021		Bridge Bridge Bridge
••••4	59.22.3102 59.22.5220	1000 uF 22 uF	-20% 10 V EL -20% 25 V EL			JP 15 JP 16	54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge
••••6	59.22.3470 59.34.2220	47 uF 22 pF	-20% 10 V EL 10% 50 V CER			ME1	1.727.360.01		VU Meter VU Meter
9	59.22.3470 59.34.2220	47 uF 22 pF	-20% 10 V EL 10% 50 V CER			MP1	54.01.0020	54 pcs	Contact Pin Push button case 3#
12	59.06.0683	68 nF	10% 50 V PETP			MP • • • • 4	1.011.235.04 1.011.235.05	4 pcs 2 pcs	Push button case 4* Push button case 5* Conductive rubber 3*
2	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			MP • • • • 6 MP • • • • 7	1.011.235.24 1.011.235.25	4 pcs 2 pcs	Conductive rubber 4* Conductive rubber 5* Bolt
5	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI 50 V SI			MP • • • • 9 MP • • • 10	1.011.235.30 1.011.235.31	37 pcs 5 pcs	Push button 14¢5 Dummy calotte Calotte red
••••8	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			MP•••12 MP•••13	1.011.235.33 1.011.235.34	26 pcs 3 pcs	Calotte yel Calotte grn Push button case with Shuttle
••••11 ••••12	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI 50 V SI			MP • • • 15 MP • • • 16 MP • • • 17	1.727.360.03 1.727.360.04 1.727.360.05	1 pcs 5 pcs	Conductive rubber with Shuttle Push button 19*14 Push button Adja
••••14 ••••15	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			MP18 MP19	1.727.362.10 1.727.360.11	1 pcs 1 pcs	Nos Label Command Panel PCB 2-pole LED Socket
				PAGE 1	STU				ANEL BOARD 2VU 1.727.362.00 PAGE
	2427 112	VALUE	COCCUCATIONS / CONTINUEDIT	MANUE	IND	ans an	DART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MA
				HANGE					I-LST Command Panel Board
••••18 ••••19	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			MP 22 MP 23 MP 24	21.53.0354 23.01.2032 24.16.1030	2 pcs 2 pcs	Hexagon socket head cap screw M3*6 Washer Fin washer
••••21 ••••22	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			MP25 MP26	43.01.0108 1.727.360.06	l pcs 1 pcs	ESE Warning label Push button labels (<,>,PLAY,STOP,REC)
24	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI			P • • • • 2 P • • • • 3	54.02.0320 54.02.0320 54.02.0320		Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8÷0.8
L1 L2	50.04.2501 50.04.2500	MV5452 MV5352 MV5352	LED grn D=5 mm LED yel D=5 mm	6 I 6 I		P • • • • • 4 P • • • • 5	54.02.0320 54.02.0320		Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8*0.8
L4 L5	50.04.2500 50.04.2500	MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm	G I		Q1	50+03+0436	8C237B 8C237B	8C547B+ 8C550B NPN 8C547B+ 8C550B NPN
L7 L8	50.04.2500 50.04.2500	MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm	GI GI		Q3 Q4	50.03.0436 50.03.0436	8C237B 3C237B	BC547B+ BC550B NPN BC547B+ BC550B NPN BC547B+ BC550B NPN
L10 L11	50.04.2500 50.04.2500	MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm	G I		Q6	50.03.0436 57.11.4391	8C237B	8C5478, 8C5508 NPN 2%, 0.25W, MF
L13 L14	50.04.2115 50.04.2500 50.04.2500	MV5752 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm	GI		R • • • • • 2 R • • • • • 3 R • • • • • 4	57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L16 L17	50.04.2500 50.04.2119	MV5352 MV57124	LED yel 0=5 mm LED red 6•35≎3•81	G I		R • • • • • 5 R • • • • • 6	57-11-4391 57-11-4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L19 L20	50.04.2119 50.04.2500	MV57124 MV5352	LED red 6.35÷3.81 LED yel 0=5 mm	G I		R • • • • • B R • • • • • 9	57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L • • • 22 L • • • 23	50.04.2500 50.04.2115	MV5352 MV5752	LED yel D=5 mm LED red D=5 mm LED red D=5 mm	G I G I G I		R 11 R 12 R 13	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L25 L26	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	teo yel 0=5 mm LED yel 0=5 mm	GI GI		R14 R15 R16	57-11-4391 57-11-4391 58-01-8203	390 Ohm 390 Ohm 20 kOhm	2%. 0.25W. MF 2%, 0.25W. MF 10%, 0.5 W. PCerm
ER (00	) 86/09/23 GP	COMMAND		D PAGE 2	S T.U	DER (	00) 86/09/23 GP	COMMAND	PANEL BOARD 2VU 1.727.362.00 PAGE
DS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF •	IND.	P 05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MA
L28	50.04.2119 50.04.2119	MV57124 MV57124	LED red 6.35÷3.81 LED red 6.35÷3.81	G I G I		R17 R18	57-11-3203 57-11-3203	20 kOhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF
L30 L31 L32	50.04.2119 50.04.2500 50.04.2500	MV57124 MV5352 MV5352	LED red 6.35\$3.81 LED yel D=5 mm LED yel D=5 mm	G I G I		R • • • • 19 R • • • • 20 R • • • 21	57.11.3203 57.11.4391 57.11.4391	20 kOhm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF
L33 L34 L35	50.04.2500 50.04.2115 50.04.2500	MV5352 MV5752 MV5352	LED yel D=5 mm LED red D=5 mm LED yel D=5 mm	G I G I		R • • • • 22 R • • • • 23 R • • • • 24	57-11-4391 57-11-4272 57-11-3203	390 Ohm 2•7 kOhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L36 L37 L38	50.04.2501 50.04.2500 50.04.2115	MV 5452 MV 5352 MV 5752	LED grn D=5 mm LED yel D=5 mm LED red D=5 mm	G I G I		R • • • • 25 R • • • • 26 R • • • • 27	57.11.4103 57.11.4103 57.11.4332	10 kühm 10 kühm 3•3 küluu	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L40 L41	50.04.2500 50.04.2500 50.04.2115	MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED red D=5 mm	GI GI		R • • • • 28 R • • • • 29 R • • • • 30	57.11.3472 57.11.4474 57.11.4153	4.7 kOhm 470 kOhm 15 kUhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
L42 L43	50.04.2501 50.04.2115	MV5452 MV5752	LED grn 0=5 mm LED red 0=5 mm	GI		R • • • • 32 R • • • • 33	57.11.4682 58.01.8203 57.11.4682	6.8 kOhm 20 kOhm 6.8 kOhm	2%, 0.25W, MF 10%, 0.5 W, PCerm 2%, 0.25W, MF
C • • • • 1 C • • • • 2 C • • • • 3	50•13•0106 50•09•0107 50•09•0107	SAA 1061 RC4559 RC4559	Oriver Oual Op. Amp. Oual Op. Amp.	Ra Ra		R • • • • 34 R • • • • 35 R • • • 36	57.11.4682 57.11.3751 57.11.3202	6.8 kOhm 750 Ohm 2 kOhm	2%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF
C • • • • • • • • • • • • • • • • • • •	50.05.0199 50.13.0106 50.09.0107	LM324 SAA 1061 RC4559	Quad Op. Amp. Oriver Oual Op. Amp.	Ph Ra		R • • • • 38 R • • • • 39	57.11.4153 57.11.4153	15 kühm 15 kühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
C 7 C 8 C 9	50.09.0107 50.05.0199 50.13.0106	RC4559 LM324 SAA 1061	Dual Op. Amp. Quad Op. Amp. Oriver	Ra NS•Mot Ph		R • • • • 40 R • • • • 41 R • • • • 42	57-11-4151 57-11-4391	150 Ohm 390 Ohm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF
•••••1 ••••2 ••••3	54.01.0287 54.01.0288 54.01.0228 54.01.0228	3-Pole 5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP AMP		R 43 R 44 R 45 R 46 R 47	57.11.4391 57.11.4391 57.11.4391 58.01.8203 57.11.3203	390 Uhm 390 Uhm 390 Uhm 20 kUhm 20 kUhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5 %, PCerm 2%, 0.25%, MF
4	34.01.0558	10 1016	525 SOURCE 50.1p	A		R • • • • 48	57.11.3203	20 kühm	2%, 0.25W, MF
P0 P1	54.01.0021 54.01.0021		Bridge Bridge			R • • • • 49 R • • • • 50	57.11.3203 57.11.4391	20 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF
o see see see see see see see see see se	12 2 3 4 4 5 6 6 7 7 8 8 9 9 10 11 12 13 14 15 16	1 1.727.370.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 2.500.0144 3 51.02.0144 4 51.02.0144 4 51.02.0144 4 51.02.0144 4 51.02.0144 4 51.02.0144 2 2 50.23.212 2 59.22.3221 2 59.22.3221 2 59.22.3221 3 59.22.3221 3 59.22.3221 3 59.22.3221 3 59.22.3221 3 59.22.3221 2 59.22.3221 2 59.22.3221 2 59.00.0083 11 59.34.2220 11 59.34.2220 11 59.00.0083 11 59.00.0083 11 59.00.0083 11 59.00.00125 6 50.00.0125 6 50.00.0125 6 50.00.0125 7 7 90.00.0125 11 30.00.0125 12 50.00.0125 13 30.00.0125 14 50.00.0125 15 50.00.0125 16 50.00.0125 17 50.00.0125 18 50.00.0125 19 50.00.0125 19 50.00.0125 10 50.00.0125 11 50.00.0125 12 50.00.0125 13 50.00.0125 14 50.00.0125 15 50.00.0125 16 50.00.0125 17 50.00.0125 18 50.00.0125 19 50.00.0125 19 50.00.0125 19 50.00.0125 10 50.00.2500 11 50.00.2500	1 1.727.370.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 2 1.727.180.00 3 51.02.0144 6 V 4 51.02.0144 6 V 2 1. 59.22.3221 220 UF 2 2 59.22.3221 220 UF 2 2 59.22.3220 22 UF 4 59.22.3220 22 UF 5 59.22.3202 22 UF 6 59.22.3202 22 UF 7 7 59.34.2220 22 UF 7 7 59.34.2220 22 UF 8 59.00.0105 1 UF 8 59.00.0105 1 UF 11 59.34.2220 22 UF 12 59.00.0683 08 NF 12 50.04.0125 1 N4448 2 2 50.04.0125 1 N4448 3 3 50.04.0125 1 N4448 6 5 50.04.0125 1 N4448 6 5 50.04.0125 1 N4448 0 5 50.04.0125 1 N4488 0 5 50.04.0125 1 N44888 0 5 50.04.0125 1 N4488 0 5 50.04.0125 1 N44888 0 5 50.04.0125 1 N44888 0 5	1	1.1727.170.00   Display Board   Shuttle Control   1.1727.170.00   Shuttle Control   Shuttle Control	1.727.370.00	1.727.170.00	1.727.170.00   Display Board   J. 34.21.0021	1,721,180,000   0,00



#### COMMAND PANEL (2 VU) 1.727.362.00 GRP30

IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQU:	VALENT	MANUF
	R54	57-11-3203	20 kOhm	2%, 0.25W, MF		
	R 55	57-11-4103	10 kOhm	2%, 0.25W, MF		
	R 56	57.11.4103	10 kühm	2%, 0.25W, MF		
	R • • • • 57	57.11.4332	3.3 kühm	2%, 0.25W, MF		
	R58	57.11.3472	4.7 kOhm	1%, 0.25W, MF		
	R59	57.11.4474	470 k0hm	2% 0.25W MF		
	R60	57.11.4153	15 kOhm	2%, 0.25W, MF		
	R****61	57.11.4682	6.8 kOhm	2%, 0.25W, MF		
	R62	58.01.8203	20 k0hm	10% 0.5 W. PCerm		
	R • • • • 63	57.11.4682	6.8 kühm	2%, 0.25W, MF		
	R64	57.11.4682	6.8 kOhm	2%, 0.25W, MF		
	R65	57-11-3751	750 Ohm	1%, 0.25W, MF		
	R • • • • 66	57.11.3202	2 kOhm	1%, 0.25W, MF		
	R • • • • 67	57.11.4332	3.3 kOhm	2%, 0.25W, MF		
	R * * * * 68	57.11.4153	15 kühm	2%, 0.25W, MF		
	R • • • • 69	57.11.4153	15 kOhm	2%, 0.25W, MF		
	R70	57.11.3182	1.8 kOhm	1%, 0.25W, MF		
	R71	57.11.4151	150 Uhm	2%+ U+25W+ MF		
	R • • • • 72	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R • • • • 73	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R • • • • 7 4	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R 75	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R • • • • 76	57.11.4391	390 Uhm	2% 0.25W MF		
	R • • • • 77	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R • • • • 78	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R 79	57.11.4391	390 Ohm	2%+ 0+25W+ MF		
	R80	57.11.4391	390 Dhm	2%, 0.25W, MF		
	R81	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R32	57-11-4391	390 Ohm	2%, 0-25W, MF		
	R 83	57.11.4223	22 kOhm	2%, 0.25W, MF		
	R • • • • 34	57.11.4223	22 kOhm	2%, 0.25W, MF		
	51	55.15.0130		Push button Switch		ITT
	XB1	53.04.0107		Lamp holder		
	X82	53.04.0107		Lamp holder		
	X33	53.04.0107		Lamp holder		

IND.	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF .
	X84	53.04.0107		Lamp holder	
	XIC1	53.03.0169	24-Pole	IC Socket	
	XICZ	53.03.0166	8-Pole	IC Socket	
	XIC3	53.03.0166	8-Pole	IC Socket	
	XIC4	53.03.0167	14-Pole	IC Socket	
	XIC.e.s	53.03.0169	24-Pole	IC Socket	
	XIC6	53.03.0166	8-Pole	IC Socket	
	XIC.e.7	53.03.0166	8-Pole	IC Socket	
	XICB	53.03.0167	14-Pole	IC Socket	
	X1C9	53.03.0169	24-Pole	IC Socket	

CER=Ceramic, EL=Electrolytic, PETP=Polyester, SI=Silicon, MF=Metal Film, PCerm=Pot. Cermet, MANUFACTURER: AMP, GIS-General Instrument, ITT, Mot=Motorola, NS=National Semiconductor, Ph=Philips, Ra=Raytheon

ORIG 86/09/23

S T U D E R (00) 86/09/23 GP COMMAND PANEL BOARD 2VU 1.727.362.00 PAGE 8



PART NO.

55.15.0130

53.03.0169 53.03.0169 53.03.0169

CER=Ceramic, EL=Electrolytic, PETP=Polyester, S1=Silicon, MF=Netal Film, PCerm=Pot. Cermet, HANUFACTUREK: AMP, GI=General Instrument, IIT, Ph=Philips, Ra=Raytheon

S T U D E R (DD) 86/11/25 GP COMMAND PANEL BOARD 2/2

24-Pole 24-Pole 24-Pole

S....1

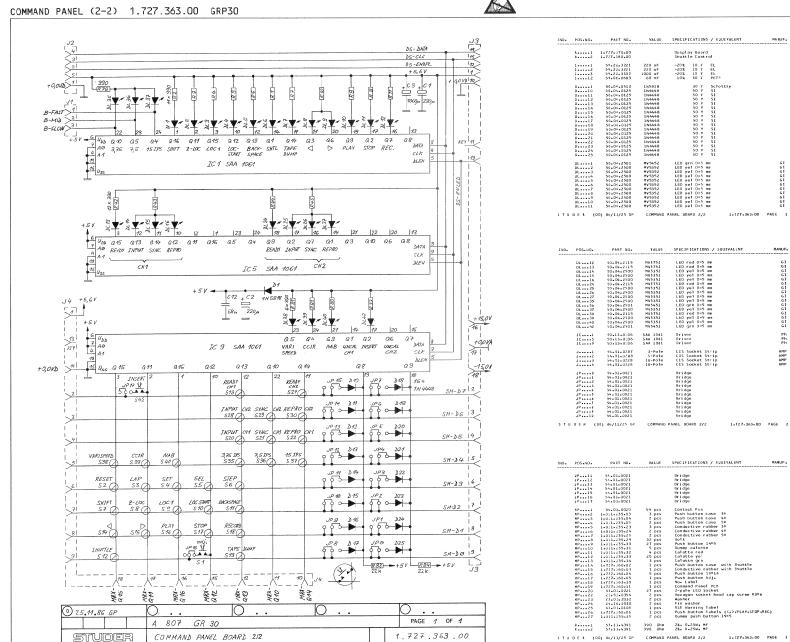
ORIG 86/11/25

VALUE SPECIFICATIONS / EQUIVALENT

Push button Switch

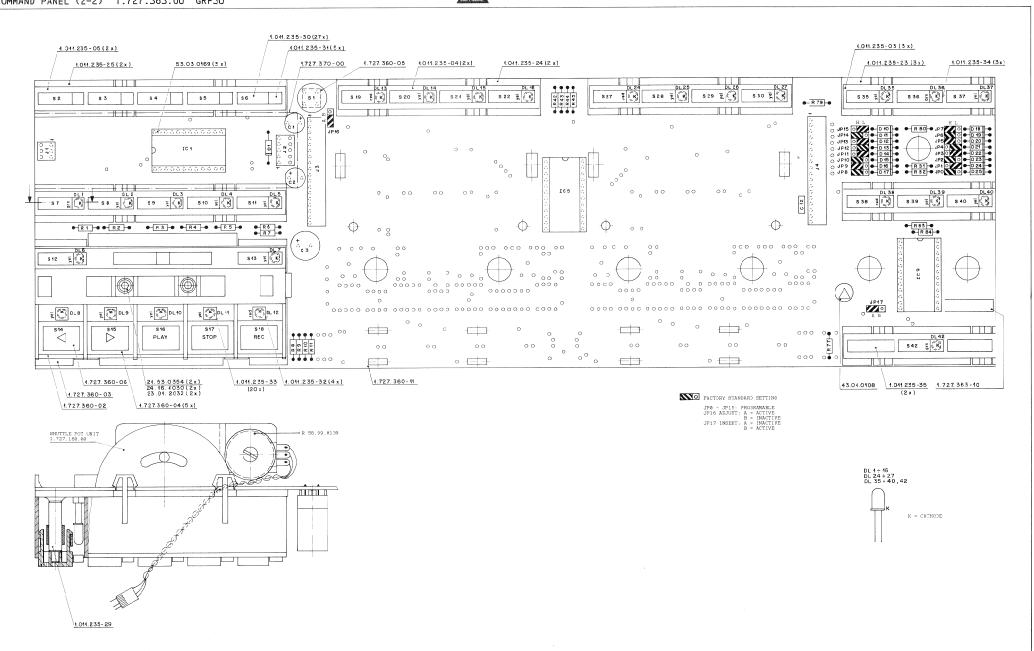
1.727.363.00 PAGE 4

IC Socket IC Socket IC Socket

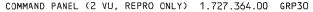


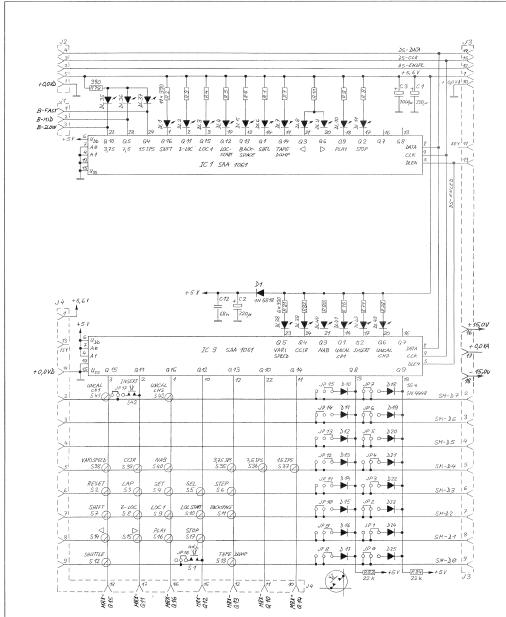


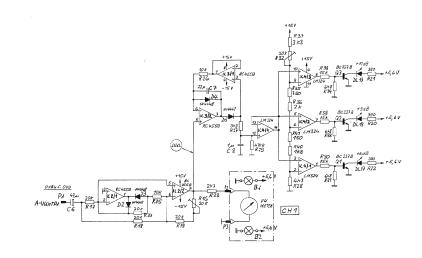
COMMAND PANEL (2-2) 1.727.363.00 GRP30

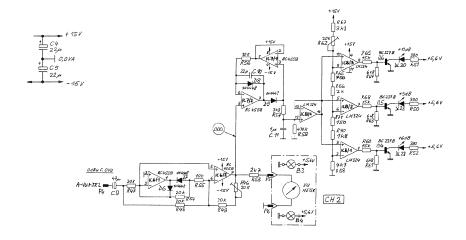










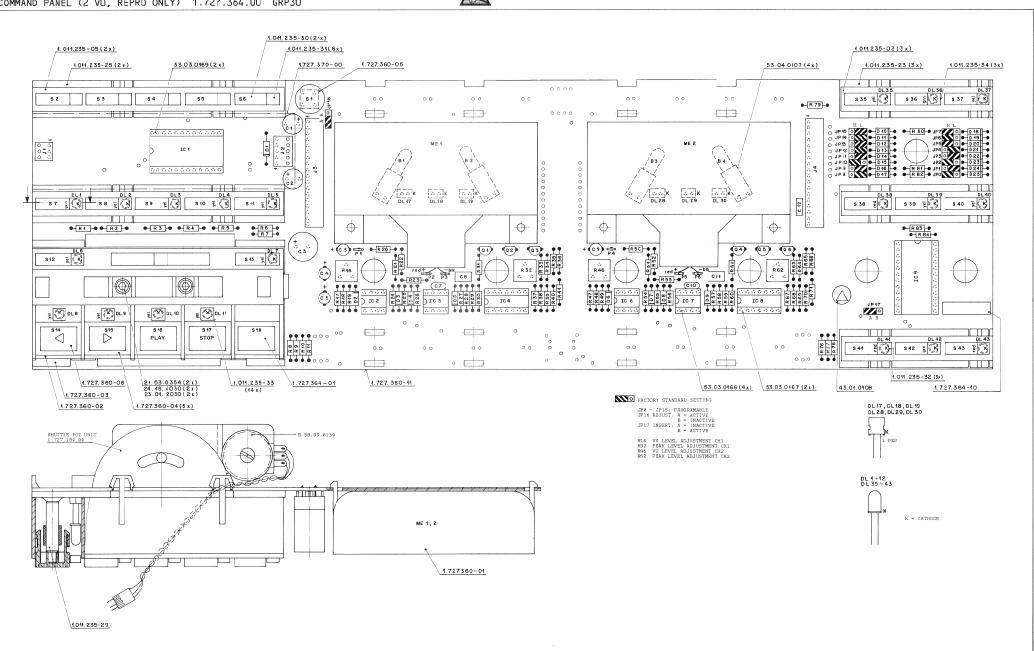


0 25.11.86 GP	0		0	0
	A 807 GR 30			PAGE 2 OF 2
ŞTUDER	COMMAND PANEL	BOARD 2VU	PBO SC '	1.727.364.00



COMMAND PANEL (2 VU, REPRO ONLY) 1.727.364.00 GRP30

STUDER

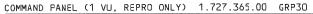


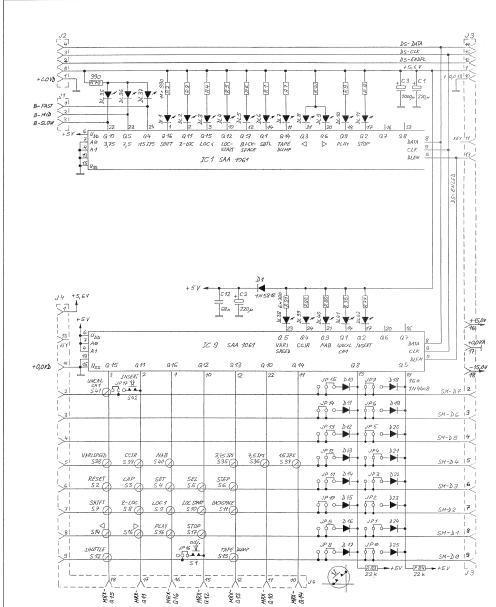


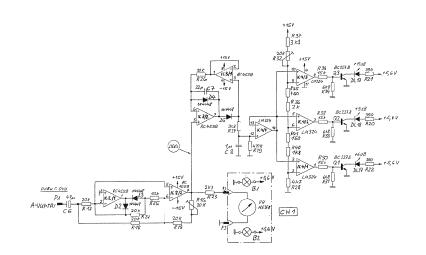
# COMMAND PANEL (2 VU, REPRO ONLY) 1.727.364.00 GRP30

νD.	P05 • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	NT	MANUF.	IND.	PDS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVA	LENT	MANUF.
	81 B2	1.727.370.00 1.727.180.00 51.02.0144 51.02.0144	6 V 6 V	Display Board Shuttle Control 0.03 A Lamp 0.03 A Lamp				MP2 MP4 MP5 MP7	54.01.0020 1.011.235.03 1.011.235.05 1.011.235.23 1.011.235.25	54 pcs 3 pcs 2 pcs 3 pcs 2 pcs	Contact Pin Push button case 3* Push button case 5* Conductive rubber 5*		
	B 4	51.02.0144 51.02.0144	6 V 6 V	0.03 A Lamp 0.03 A Lamp -20% 10 V EL			(00) (01)	MP8 MP9 MP10 MP10	1.011.235.29 1.011.235.30 1.011.235.31 1.011.235.31	26 pcs 21 pcs 5 pcs 6 pcs	Bolt Push button 1405 Dummy calotte Dummy calotte		
	C 2 C 3 L 4	59.22.3221 59.22.3221 59.22.3102 59.22.5220	220 uF 220 uF 1000 uF 22 uF	-20% 10 V EL -20% 10 V EL -20% 10 V EL -20% 25 V EL			(00)	MP11 MP11	1.011.235.32 1.011.235.32 1.011.235.32	4 pcs 3 pcs 14 pcs	Calotte red Calotte red Calotte yel		
	C 6 C 7	59.22.5220 59.22.3470 59.34.2220	22 uF 47 uF 22 pF	-20% 25 V EL -20% 10 V EL 10% 50 V CER				MP13 MP14 MP15	1.011.235.34 1.727.360.02 1.727.360.03	3 pcs 1 pcs 1 pcs	Calotte grn Push button case with Conductive rubber with	Shuttle	
	C • • • • • 8 C • • • • • 9 C • • • • 10	59.06.0105 59.22.3470 59.34.2220	1 uF 47 uF 22 pF	10% 50 V PETP -20% 10 V EL 10% 50 V CER				MP16 MP17 MP18	1.727.360.04 1.727.360.05 1.727.364.10	5 pcs 1 pcs 1 pcs	Push button 19\$14 Push button Adj. No. Label Command Panel PCB		
	C 12	59.06.0105 59.06.0683 50.04.0512	1 uF 68 nF 1N5818	10% 50 V PETP 10% 50 V PETP 30 V Schottky			(00) (01)	MP20 MP20 MP20	1.727.360.11 53.03.0221 53.03.0221 1.727.362.93	1 pcs 27 pcs 26 pcs 2 pcs	2-pole LED Socket 2-pole LED Socket L-LST Command Panel Bo	ard	
	D2 D3 D4	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI				MP22 MP23 MP24	21.53.0354 23.01.2032 24.16.1030	2 pcs 2 pcs 2 pcs	Hexagon socket head ca Washer Fin washer	ip screw M3¢6	
	D6 D7	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			(01)	MP25 MP26 MP27	43.01.0108 1.727.360.06 1.727.364.01	1 pcs 1 pcs 1 pcs	ESE Warning label Push button labels (<, Push button label blan		EC)
	D9 D10	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI				P · · · · · 2 P · · · · · 3	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8		AMP AMP
	D12 D13 D14	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI				P • • • • • • • • • • • • • • • • • • •	54.02.0320 54.02.0320 54.02.0320		Plug 2.8#0.8 Plug 2.8#0.8 Plug 2.8#0.8		AMP AMP AMP
	D15 D16	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI	7.7. 7.7. 00	0.465		Q2 Q3	50.03.0436 50.03.0436 50.03.0436	BC237B BC237B BC237B	BC547B+ BC550B NPN BC547B+ BC550B NPN BC547B+ BC550B NPN		
100	) E R (U	1) 87/05/08 GP	CUMMAND	PANEL BOARD 2VU PBO 1.	727。364。00	PAGE 1		Q 4 Q 5 Q 6	50.03.0436 50.03.0436 50.03.0436	BC2378 BC2378 BC2378	BC547B+ BC550B NPN BC547B+ BC550B NPN BC547B+ BC550B NPN		
								R * * * * * 2 R * * * * * 3	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
ND •	P05-N0-	PART NO.	VALUE	SPECIFICATIONS / EQUIVAL	ENT	MA NUF.		R • • • • • 4 R • • • • • 5 R • • • • • 6	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF		
	D17 D18	50.04.0125 50.04.0125	1N4448 1N4448	50 V SI 50 V SI				R8 R9 R10	57.11.4391 57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	D19 D20 D21	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI				R11 R16 R17	57.11.4391 58.01.8203 57.11.3203	390 Ohm 20 kohm 20 kohm	2%, 0.25W, MF 10%, 0.5 H, PCerm 2%, 0.25W, MF		
	D22 D23 D24	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI				R 19 R 20	57-11-3203 57-11-3203 57-11-4391 57-11-4391	20 kOhm 20 kOhm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	DL 1 DL 2	50+04+0125 50+04+2501 50+04+2500	1N4448 MV5452 MV5352	LED grn D=5 mm LED yel D=5 mm		G I		R • • • • 21 R • • • • 22 R • • • • 23 R • • • • 24	57-11-4391 57-11-4272 57-11-3203	390 Ohm 2•7 kOhm 20 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	DL 4 DL 5	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm		G I G I		R 25 R 26 R 27	57.11.4103 57.11.4103 57.11.4332	10 kOhm 10 kOhm 3-3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	DL6 DL7 DL9	50.04.2500 50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm		GI GI GI		R **** 28 R **** 29 R *** 30 R *** 31	57.11.3472 57.11.4474 57.11.4153 57.11.4682	4.7 kOhm 470 kOhm 15 kOhm 6.8 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
00)	DL10 DL11 DL12	50.04.2500 50.04.2500 50.04.2115	MV5352 MV5352 MV5752	LED yel D=5 mm LED yel D=5 mm LED red D=5 mm		G I G I		R32 R33 R34	58.01.8203 57.11.4662 57.11.4682	20 kOhm 6•8 kOhm 6•8 kOhm	10%, 0.5 W, PCerm 2%, 0.25H, MF 2%, 0.25W, MF		
01)	DL • • • 12 DL • • • 17 DL • • • 18	50.04.2119 50.04.2119 50.04.2119	MV57124 MV57124 MV57124	not used LED red 6.35÷3.81 LED red 6.35¢3.81 LED red 6.35¢3.81		G I G I		R36 R36	57.11.3751 57.11.3202 57.11.4332 57.11.4153	750 Ohm Z KOhm 3.3 kOhm 15 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	DL 19 DL 28 DL 29 DL 30	50.04.2119 50.04.2119 50.04.2119 50.04.2119	MV57124 MV57124 MV57124 MV57124	LED red 6.35*3.81 LED red 6.35*3.81 LED red 6.35*3.81		61 61 61		R 38 R 39 R 40 R 41	57-11-4153 57-11-3182 57-11-4151	15 kOhm 1.8 kOhm 150 Ohm	2%, 0.25%, MF 1%, 0.25%, MF 2%, 0.25%, MF		
	DL35 DL36 DL37	50.04.2500 50.04.2501 50.04.2500	MV5352 MV5452 MV5352	LED yel D=5 mm LED grn D=5 mm LED yel D=5 mm		GI GI		R • • • • 46 R • • • • 47 R • • • 48	58.01.8203 57.11.3203 57.11.3203	20 kOhm 20 kOhm 20 kOhm	10%, 0.5 W, PCerm 2%, 0.25W, MF 2%, 0.25W, MF		
	DL 38 DL 39 DL 40 DL 41	50.04.2115 50.04.2500 50.04.2500 50.04.2115	MV5752 MV5352 MV5352 MV5752	LED red D=5 mm LED yel D=5 mm LED yel D=5 mm LED red D=5 mm		G1 G1 G1 G1		R 50 R 51 R 52	57.11.3203 57.11.4391 57.11.4391 57.11.4391	20 kOhm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
TUI	DL • • • 42	50.04.2501 1) 87/05/08 GP	MV5452	LED grn D=5 mm	727•364•00	GI PAGE 2		R • • • • 53 R • • • • 54 R • • • • 55	57.11.4272 57.11.3203 57.11.4103	2.7 kOhm 20 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
								R * * * * 56 K * * * * 57 R * * * * 59	57-11-4103 57-11-4332 57-11-3472 57-11-4474	10 kOhm 3.3 kOhm 4.7 kOhm 470 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF		
								R • • • • 60 R • • • • 61 R • • • • 62	57.11.4153 57.11.4682 58.01.8203	15 kUhm 6.8 kOhm 20 kOhm	2%, 0.25W+ MF 2%, 0.25W+ MF 10%, 0.5 W+ PCerm		
IND.	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVAL	ENT	MANUF.		R * * * * 63 R * * * * 64 R * * * * 65 R * * * * 66	57.11.4682 57.11.4682 57.11.3751 57.11.3202	6.8 kDhm 6.8 kDhm 750 Dhm 2 kDhm	2%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	DL43 IC1	50.04.2115 50.13.0106	MV5752 SAA 1061	LED red D=5 mm Driver		G I Ph		R • • • • 67 R • • • • 69	57.11.4332 57.11.4153 57.11.4153	3.3 kOhm 15 kOhm 15 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	IC 3 IC 4	50.09.0107 50.09.0107 50.05.0199	RC 4559 RC 4559 LM324	Dual Op. Amp. Dual Op. Amp. Quad Op. Amp.		Ra Ra NS•Mot		R 70 R 71 R 76 R 77	57.11.3182 57.11.4151 57.11.4391 57.11.4391	1.8 kOhm 150 Ohm 390 Ohm 390 Ohm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	IC 6 IC 8 IC 9	50.09.0107 50.09.0107 50.05.0199 50.13.0106	RC 4559 RC 4559 LM324 SAA 1061	Dual Op. Amp. Dual Op. Amp. Quad Op. Amp. Oriver		Ra Ra NS∓Mot Ph		R78 R79 R80	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	J1 J2	54.01.0287 54.01.0288	3-Pole 5-Pole	CIS Socket Strip CIS Socket Strip		AMP AMP AMP		R • • • • 81 R • • • • 82 R • • • • 83 R • • • • 84	57-11-4391 57-11-4391 57-11-4223 57-11-4223	390 Uhm 390 Ohm 22 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	J4 JP0	54.01.0228 54.01.0228 54.01.0021	18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip Bridge		AMP		5 • • • • 1	55.15.0130	26 801111	Push button Switch		ITT
	JP • • • • 2 JP • • • • 3	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge				XB2 XB2 XB3	53.04.0107 53.04.0107 53.04.0107 53.04.0107		Lamp holder Lamp holder Lamp holder Lamp holder		
	JP 5 JP 6 JP 7	54.01.0021 54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge				XIC1 XIC2	53.03.0169 53.03.0166	24-Pole 8-Pole	IC Socket IC Socket		
	JP8 JP9 JP10	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge				XIC 4 XIC 6	53.03.0166 53.03.0167 53.03.0166	8-Pole 14-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
	JP12 JP13 JP14	54.01.0021 54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge				XIC7 XIC8 XIC9	53.03.0166 53.03.0167 53.03.0169	14-Pole 24-Pole	IC Socket IC Socket		
	JP15 JP16 JP17	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge				8.5.87 Cor					
	ME 1 ME 2	1.727.360.01		VU Meter VU Meter			MF=Me	tal Film,	=Electrolytic, P PCerm=Pot. Cerme MP, GI=General I S=National Semic	t, nstrument, Il	, SI=Silicon, T, Mot=Motorola, n=Philips, Ra=Raytheon		
	DER (	01) 87/05/08 GP	COMMAND	PANEL BOARD ZVU PBO 1	.727.364.00	PAGE 3	00.10		(01) 87/05/08	onductor + PI	xp34 Na-Naycheon		









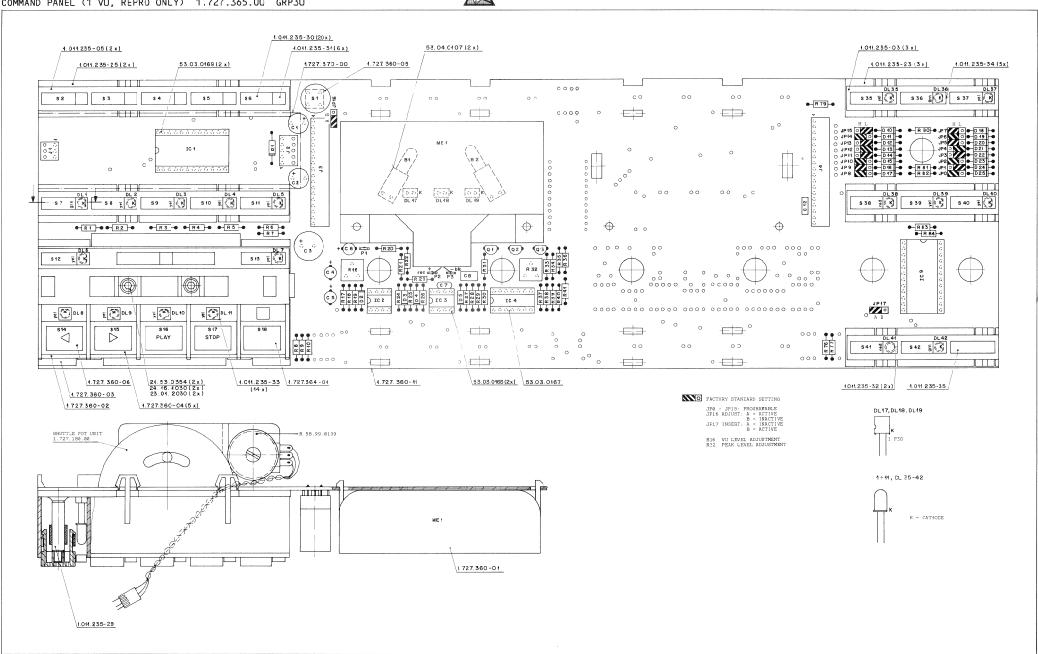
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1 24.9.87 GP	0	0	0
	A 807 GR 30		PAGE 2 OF 2
STUDER	COMMAND PANEL	BOARD 1 VU PBO	SC 1.727.36 <b>5</b> .00



COMMAND PANEL (1 VU, REPRO ONLY) 1.727.365.00 GRP30

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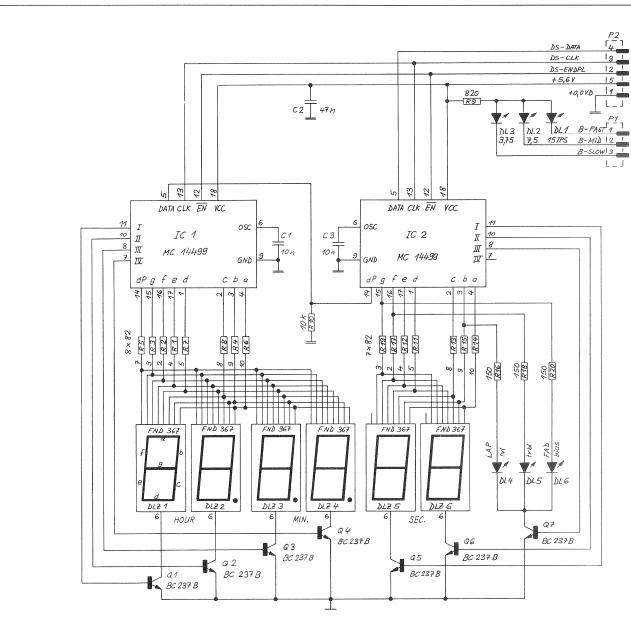


#### COMMAND PANEL (1 VU, REPRO ONLY) 1.727.365.00 GRP30

ND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	
		1.727.370.00 1.727.180.00		Display Board Shuttle Control			MP22 MP23 MP24	21.53.0354 23.01.2032 24.16.1030	2 pcs 2 pcs 2 pcs 2 pcs	Hexagon socket head cap sc Washer Fin washer	
	B1 B2	51.02.0144 51.02.0144	6 V 6 V	0.03 A Lamp 0.03 A Lamp			MP • • • 25 MP • • • 26 MP • • • 27	43.01.0108 1.727.360.06 1.727.364.01	1 pcs 1 pcs 1 pcs	ESE Warning label Push button labels (<,>+PL Push button label blank (f	AY,STOP,REC) or S18)
	C 2 C 3 C 4	59.22.3221 59.22.3221 59.22.3102 59.22.5220	220 uF 220 uF 1000 uF 22 uF	-20% 10 V EL -20% 10 V EL -20% 10 V EL -20% 25 V EL			MP28 P1 P2	54.02.0320 54.02.0320	1 pcs	Oummy push button 19*5 Plug 2-8*0-8 Plug 2-8*0-8	AMI AMI AMI
	C 6 C 7 C 8	59.22.5220 59.22.3470 59.34.2220 59.06.0105 59.06.0683	22 uF 47 uF 22 pF 1 uF 68 nF	-20% 25 V EL -20% 10 V EL 10% 50 V CER 10% 50 V PETP 10% 50 V PETP			Q 1 Q 2 Q 3	54.02.0320 50.03.0436 50.03.0436 50.03.0436	BC237B BC237B BC237B	Plug 2.8*0.8  BC5478, BC550B NPN BC5478, BC550B NPN BC5478, BC550B NPN	Ani
	D1 D2	50-04-0512 50-04-0125	1N5818 1N4448	30 V Schottky 50 V SI			R 1 R 2	57.11.4391 57.11.4391	390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D4 D5 D10	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			R 4 R 5 R 6	57 • 11 • 4391 57 • 11 • 4391 57 • 11 • 4391 57 • 11 • 4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D12 D13	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R 6 R 9	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W. MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D14 D15 D16 D17	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R10 R16 R17 R18	57-11-4391 58-01-8203 57-11-3203 57-11-3203	390 Ohm 20 kOhm 20 kOhm 20 kOhm	2%, 0.25H, MF 10%, 0.5 W, PCerm 2%, 0.25W, MF 2%, 0.25W, MF	
	D18 D19 D20	50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI			R 20 R 21	57.11.3203 57.11.4391 57.11.4391	20 kOhm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	D 22 D 23 D 24	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50 V SI 50 V SI 50 V SI 50 V SI			R 22 R 23 R 24 R 25	57.11.4391 57.11.4272 57.11.3203 57.11.4103	390 Ohm 2•7 kOhm 20 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
Tυ	D25	50.04.0125 ) 87/09/24 GP	1N4448	50 V SI ANEL BOARD 1VU PBO 1.727.365.00	PAGE 1	STU	R26	57-11-4103 0) 87/09/24 GP	10 kOhm	2% 0.25W MF	-365-00 PAGE
1D •	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF .	IND.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MANU
	DL 1 DL 2 DL 3	50.04.2501 50.04.2500 50.04.2500	MV5452 MV5352 MV5352	LED grn D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI GI		R • • • • 27 R • • • • 28 R • • • • 29	57.11.4332 57.11.3472 57.11.4474	3.3 kOhm 4.7 kOhm 470 kOhm	2%, 0°25W, MF 1%, 0°25W, MF 2%, 0°25W, MF	
	DL5 DL6	50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R 30 R 31 R 32	57-11-4153 57-11-4682 58-01-8203	15 kOhm 6.8 kOhm 20 kOhm 6.8 kOhm	2% 0.25% MF 2% 0.25% MF 10% 0.5 Wp PCerm 2% 0.25% MF	
	DL 9 DL 9 DL 10	50.04.2500 50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352 MV5352	LED yel 9-5 mm LED yel 0-5 mm LED yel D-5 mm LED yel D-5 mm	61 61 61		R 34 R 35 R 36	57.11.4682 57.11.4682 57.11.3751 57.11.3202	6.8 kOhm 750 Ohm 2 kOhm	2%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
	DL11 DL17 DL18	50.04.2500 50.04.2119 50.04.2119	MV5352 MV57124 MV57124	LED yel D=5 mm LED red 6.35≑3.81 ` LED red 6.35≑3.81	GI GI		R 37 R 38 R 39	57.11.4332 57.11.4153 57.11.4153	3.3 kOhm 15 kOhm 15 kUhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL 35 DL 36 DL 37	50.04.2500 50.04.2500 50.04.2501 50.04.2500	MV57124 MV5352 MV5452 MV5352	LED red 6∙35¢3∙81 LED yel D=5 mm LED grn D=5 mm LED yel D=5 mm	6I 6I 6I		R • • • • 40 R • • • • 41 R • • • • 76 R • • • • 77	57.11.3182 57.11.4151 57.11.4391 57.11.4391	1.8 kOhm 150 Ohm 390 Ohm 390 Ohm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL38 DL39 DL40	50.04.2115 50.04.2500 50.04.2500	MV5752 MV5352 MV5352	LED red D=5 mm LED yel D=5 mm LED yel D=5 mm	GI GI		R 80 R 81	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	DL 42 DL 42	50.04.2115 50.04.2501 50.13.0106	MV5752 MV5452 SAA 1061	LED red D=5 mm LED grn D=5 mm Driver	GI GI Ph		R * * * * 82 R * * * * 83 R * * * * 84	57.11.4391 57.11.4223 57.11.4223	22 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	IC2 IC3 IC4 IC9	50.09.0107 50.09.0107 50.05.0199 50.13.0106	RC 4559 RC 4559 LM324 SAA 1061	Dual Op. Amp. Oual Op. Amp. Quad Op. Amp. Oriver	Ra Ra NS+Mot Ph		XB1 XB2	55.15.0130 53.04.0107 53.04.0107		Push button Switch Lamp holder Lamp holder	II
	J2 J3 J4	54-01-0287 54-01-0288 54-01-0228 54-01-0228	3-Pole 5-Pole 18-Pole 18-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP AMP AMP		XIC 2 XIC 3 XIC 4 XIC 9	53.03.0169 53.03.0166 53.03.0166 53.03.0167 53.03.0169	24-Pole 8-Pole 8-Pole 14-Pole 24-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket	
	JP0 JP1 JP2	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge			X10000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	211010	TO SOCKET	
ΤU		0) 87/09/24 GP	COMMAND	PANEL BOARD 1VU PBO 1.727.365.00	PAGE 2	STU	DER (	00) 87/09/24 GP	C OMMAND	PANEL BOARD IVU PBO 1.72	7.365.00 PAGE
ND.	POS •NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	IND.	P05•N0•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALEN	T MANU
	JP3 JP4	54.01.0021 54.01.0021		Bridge Bridge		CER=C	eramic, EL:	Electrolytic, P	TP=Polyeste		
	JP 5 JP 6 JP 7	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge		MF=Me	tal Film. A ACTURER: A	PCerm=Pot. Cerme MP, GI=General I	t, nstrument, I	TT, Mot=Motorola, h=Philips, Ra=Raytheon	
	JP8 JP9 JP10 JP11	54.01.0021 54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge Bridge							
	JP•••12 JP•••13 JP•••14	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge							
	JP16 JP16 JP17	54.01.0021 54.01.0021 54.01.0021		Bridge Bridge Bridge							
	MP1	1.727.360.01 54.01.0020	54 pcs 3 pcs	VU Meter Contact Pin Push button case 3÷							
	MP2 MP5 MP7	1.011.235.03 1.011.235.05 1.011.235.23 1.011.235.25	2 pcs 3 pcs 2 pcs	Push button case 5≎ Conductive rubber 3≎ Conductive rubber 5≎							
	MP8 MP9 MP10	1.011.235.29 1.011.235.30 1.011.235.31	25 pcs 20 pcs 6 pcs	Bolt Push button 1405 Dummy calotte Calotte red							
	MP11 MP12 MP13 MP14	1.011.235.32 1.011.235.33 1.011.235.34 1.727.360.02	2 pcs 14 pcs 3 pcs 1 pcs	Calotte yel Calotte grn Push button case with Shuttle							
	MP15 MP16 MP17	1.727.360.03 1.727.360.04 1.727.360.05	1 pcs 5 pcs 1 pcs	Conductive rubber with Shuttle Push button 19*14 Push button Adj.							
	MP19 MP20	1.727.365.10 1.727.360.11 53.03.0221 1.727.362.93	1 pcs 1 pcs 22 pcs 1 pcs	No• Label Command Panel PCB 2-pole LED Socket L-LST Command Panel Board		ORTG	87/09/24				
			. 200								



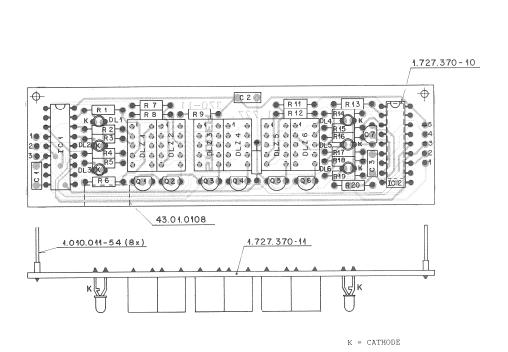
#### DISPLAY 1.727.370.00 GRP31



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	A 807 GR 31				PAGE 1 OF 1
STUDER	DISPLAY BOARD		S	SC 1.	727,370.00



## DISPLAY 1.727.370.00 GRP31



IND.	POS .NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVA		MANUI		IND.	POS-NO-	PART NO+		LUE	SPECIFICATIONS / EGUI		MANU	
	C 1	59.06.0103	10 nF	10%, 63 V, PETP					R 4		82		2%, 0.25W, MF			
	C * * * * * 2	59.06.0473	47 nF	10%, 63 V, PETP					R 5		82		2%, 0.25W, MF			
	C 3	59.06.0103	10 nF	10%, 63 V, PETP					R 6		82		2%, 0.25W, MF			
									K 7	57-11-4820	82		2%, 0.25W, MF			
	DL 1	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R 8		82		2%, 0.25W, MF			
	DL····Z	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R 9		820		24. 0.25W, MF			
	DL 3	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R10		10 K		2%, 0.25W, MF			
	DL 4	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R11	57.11.4820	82		2%, 0.25W, MF			
	DL 5	50-04-2129	CQV11-7	LED red D=3 mm		Ste			K 12		82		2% 0-25W MF			
	Dt6	50.04.2129	CQV11-7	LED red D=3 mm		Sie			R13		82		2%, 0.25W, MF			
	0								R14		82		2%, 0.25W, MF			
	DL Z • • • 1	73.01.0121	FND 367	Seven Segment Display		GI			R 15		82		2%, 0.25W, MF			
	DLZ	73.01.0121	FND 367	Seven Segment Display		GI			R16		150		2%, 0.25W, MF			
	DL / 3	73.01.0121	FND 367	Seven Segment Display		GI			R17		82		2%, 0.25W, MF			
	DL2 4	73.01.0121	FND 367	Seven Segment Display		GI			R 1 d		1 50		2%, 0.25W, MF			
	DL Z * * * 5	73.01.0121	FND 367	Seven Segment Display		GI			R19		82		2% 0 • 25W • MF			
	DL Z 6	73.01.0121	END 367	Seven Segment Display		GI			R20	57.11.4151	150	Ohm	2%, 0.25W, MF			
	10 1	50.07.0010	MC 14499	Display Decoder/Driver	r	Mot										
	102	50-07-0010	MC 14499	Display Decoder/Oriver	r	Mot										
	MP • • • • 1	1.727.370.11	1 pcs	DISPLAY PCB												
	MP Z	1.010.011.54	8 pcs	Contact pin												
	MP 3	1-727-370-10	1 pcs	No. Label												
	MP 4	43.01.0108	1 pcs	ESE Warning label												
	Ql	50.03.0436	BC237B	BC5478, BC550B NPN												
	Q Z	50.03.0436	BC2378	8C5478 BC5508 NPN												
	0 3	50.03.0436	BC237b	BC547B, BC550B NPN												
	Q4	50.03.0436	BC237B	BC547B+ BC550B NPN												
	65	50.03.0436	BC2376	BC547B+ BC550B NPN												
	Q 6	50.03.0436	BC237B	BC5478, BC550B NPN												
	4 7	50.03.0436	BC237B	BC547B, BC550B NPN				PETP=	Polyester	, MF=Metal Film						
								MANUF.	ACTURER:	GI=General Instru	ments,	Mot=M	otorola, Sie=Siemens			
	K 1	57.11.4820	82 Ohm	2%, 0.25W, MF												
	R 2	57-11-4820	82 Ohm	2%, 0.25W, MF												
	R 3	57-11-4820	82 Ohm	21, 0-25W, MF				ORIG	86/08/08							
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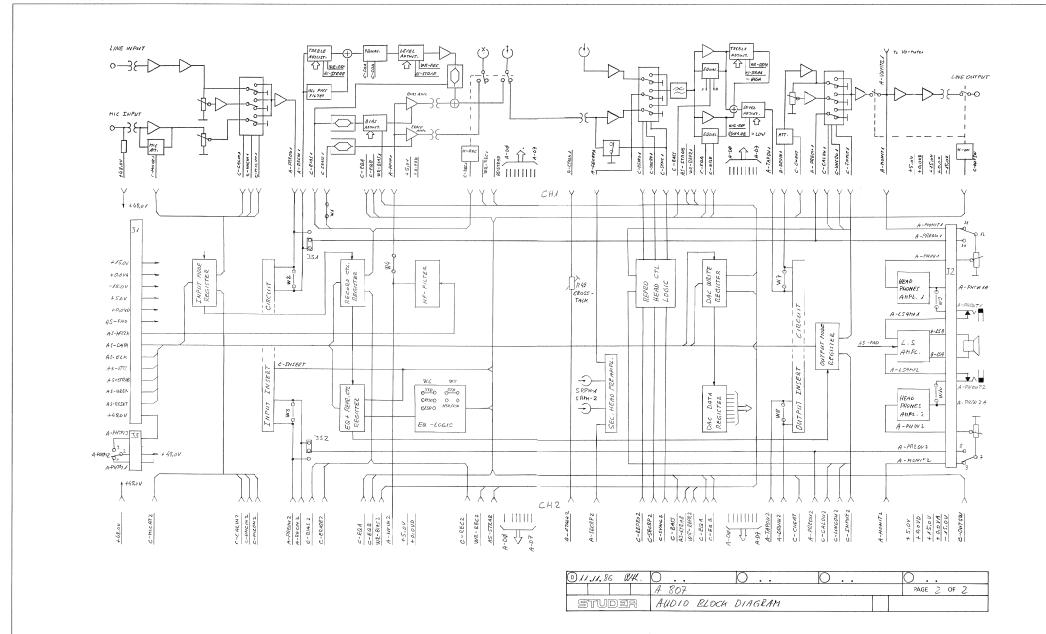
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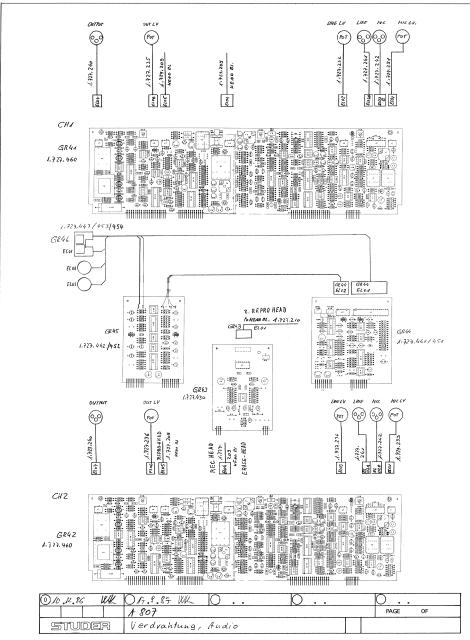


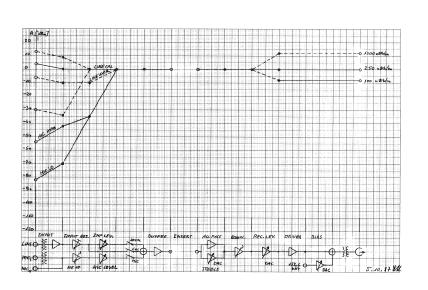
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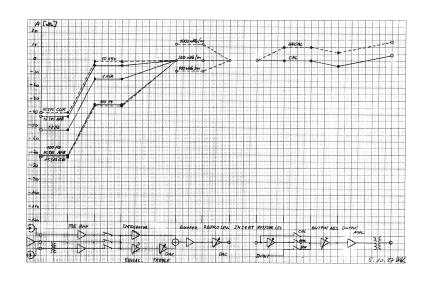
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#### AUDIO WIRING DIAGRAM

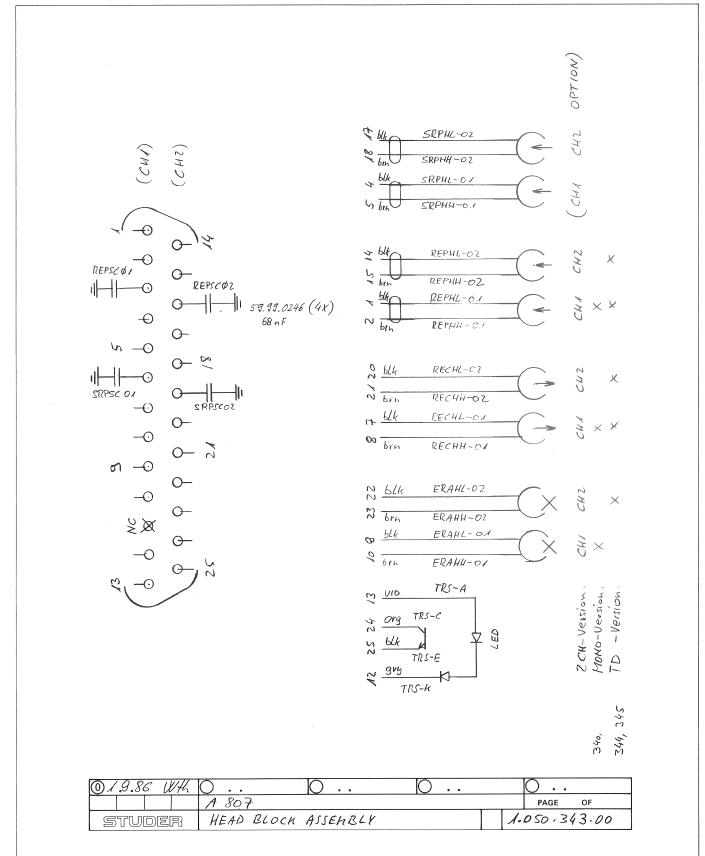
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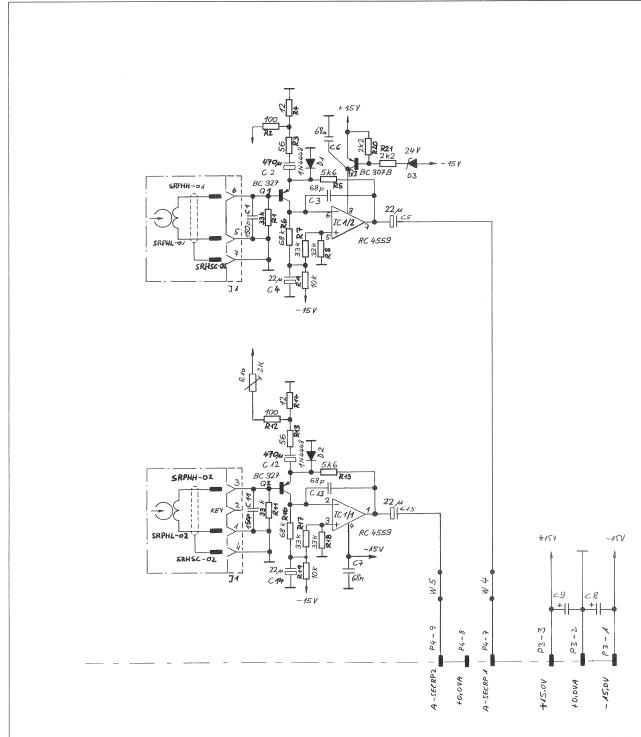


#### HEAD BLOCK ASSEMBLY 1.050.340.00 GRP39





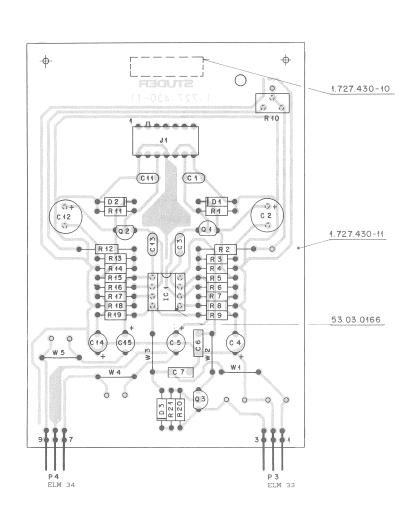
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## REPRODUCE PREAMPLIFIER 1.727.430.00 GRP43

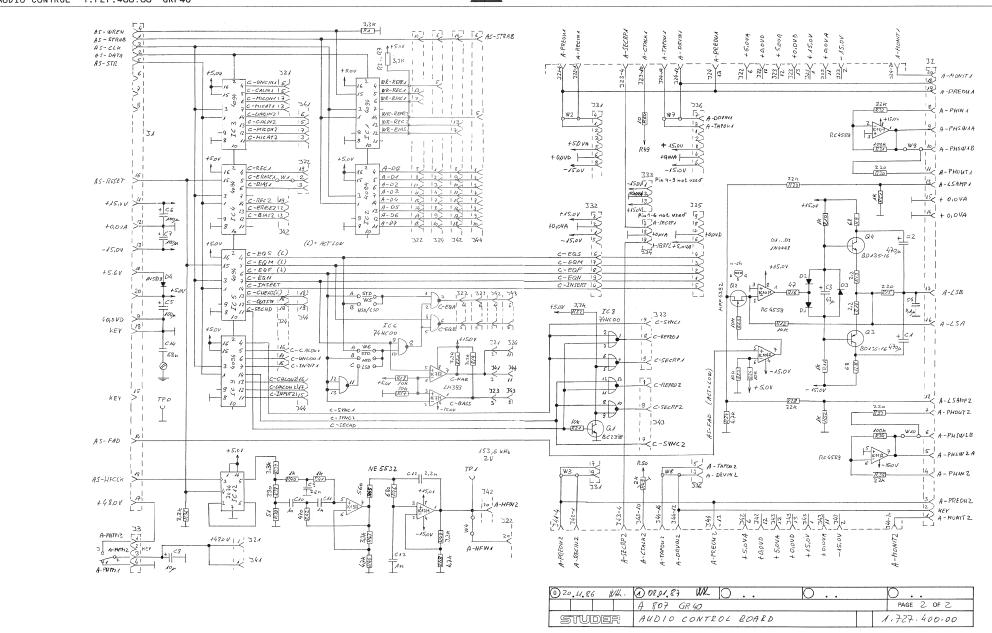


59.34.4151 59.22.2471	150 pF	10% 50V Cer						
				R * * * * * 5	57-11-4562	5.6 kOhm	2% + 0 + 25W + MF	
	470 UF	-20% 6.3V EL		R * * * * * 6	57-11-4683	68 kOhm	2%, 0.25W, MF	
59-34-4680	68 pF	10% 50V Cer		R * * * * * 7	57-11-4333	3.3 k Ohm	2% 0.25W • 4F	
59.22.5220	22 uF	-20% 25V EL		R = = = = 8	>7-11-4333	33 kOhm	2%, 0.25W, MF	
59.22.5220	22 uF	-20% 25V EL		R 9	57-11-4103	10 kOhm	2% 0 . 25W + MF	
					57.11.4333	33 kOhm	2%+ 0-25W+ MF	
				R 12	>7-11-4101	100 Ohm	2%, 0.25W, 4F	
				R * * * * 1.3	57.11.4560	56 Ohm	2% + 0 • 25W + 4F	
59.34-4151	150 nF				57-11-4120	12 Ohm	2%+ 0+25W+ MF	
				R * * * * 15	57-11-4562	5.6 kOhm	2%, 0.25W, MF	
				R * * * * 1.6	57-11-4683	68 kOhm	2%+ 0+25W+ MF	
		-20% 25V EL		R 17	57-11-4333	33 k0hm	2%, 0.25W, MF	
		-20% 25V EL		R18	57.11.4333	33 k0hm	2%, 0.25W, MF	
,,				R * * * * 19	57.11.4103	10 kOhm	2%, 0.25W, MF	
50-04-0125	1N4448	50V 51		R * * * * 20	57.11.4222	2.2 k0hm	2%, 0.25W, MF	
	1N4448	50V SI		R21	57.11.4222	2.2 kOhm	2%, 0.25w, MF	
50.04.1121	24 V	5% 0.4W Zener						
				W1			wire bridge	
50.09.0107	RC 4559	Oual Op. Amp.	Ra	W = = = = <			wire bridge	
				w3			wire bridge	
54-01-0244	7-Pole	CIS Socket Strip	AMP	W4				
				W****5	64.01.0106		wire bridge	
1-727-430-10	1 pcs	No. Label	St					
1.727.430.11	1 pcs	Preamlifier PCB	St	XIC1	53.03.0166	8 POLE	IC Socket	
50.03.0625	BC327	PNP						
50.03.0625								
50.03.0515	BC 307B	BC557B+ BC560B PNP						
54.01.0227	3-Pole	CIS Plug Strip	AMP					
54.01.0227	3-Pole	CIS Plug Strip	AMP	fer=feramic, FL=F	lectrolytics P	FTP=Polveste	r. SI=Silicon.	
57-11-4333	33 kOhm	2%, 0.25W, 4F		MF=Metal Film, P	4G=Cermet	,		
57.11.4101	100 Ohm	2%, D.25W, MF		MANUFACTURER: AME	P=AMP, Ra=Rayth	eon+ St=Stud	er	
57.11.4560	56 Ohm	2%, 0.25W, MF						
57 - 11 - 4120	12 Ohm	2%, 0.25W, MF		ORIG 86/10/17				
	59.06.0083 59.34.4151 59.22.2471 59.32.22471 59.34.4680 59.22.520 50.04.0125 50.04.0125 50.04.1121 50.09.0107 54.91.0244 1.77.7.430.10 1.77.7.430.11 50.03.0625 50.03.0625 50.03.0525	\$9.16.0883 68 nF \$9.34.4151 150 pF \$9.22.2471 470 uF \$9.32.22471 470 uF \$9.34.4680 68 pF \$9.22.5220 22 uF \$0.04.0125 NA4488 \$0.04.1121 24 V \$0.09.0107 RC 4559 \$1.727.430.10 1 pcs \$1.727.430.11 1 pcs \$1.727.430.10 1 pcs \$1.727.430.10 1 pcs \$1.727.430.10 2 pcs \$0.03.0025 8C327 \$0.03.0025 8C327 \$0.03.0025 8C327 \$0.03.0027 3-Pole \$4.01.0227 3-Pole \$4.01.0227 3-Pole \$4.01.0227 3-Pole \$5.11.14.101 100 00m \$57.11.14.505 56 0m	59.06.0883	10	100   100	100	10	Sp.06.0083

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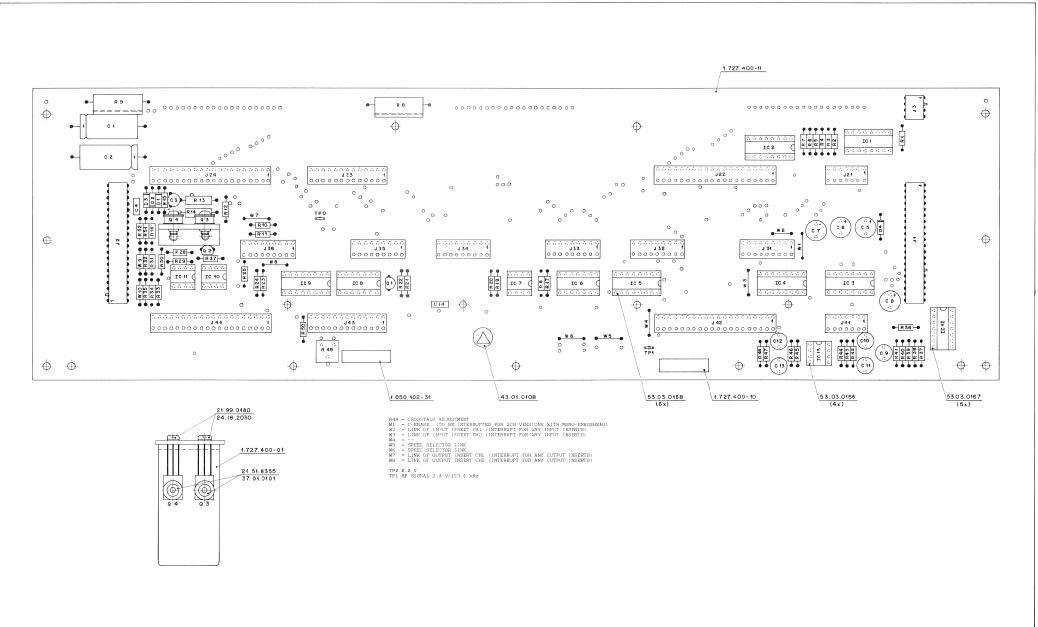


AUDIO CONTROL 1.727.400.00 GRP40





AUDIO CONTROL 1.727.400.00 GRP40





## AUDIO CONTROL 1.727.400.00 GRP40

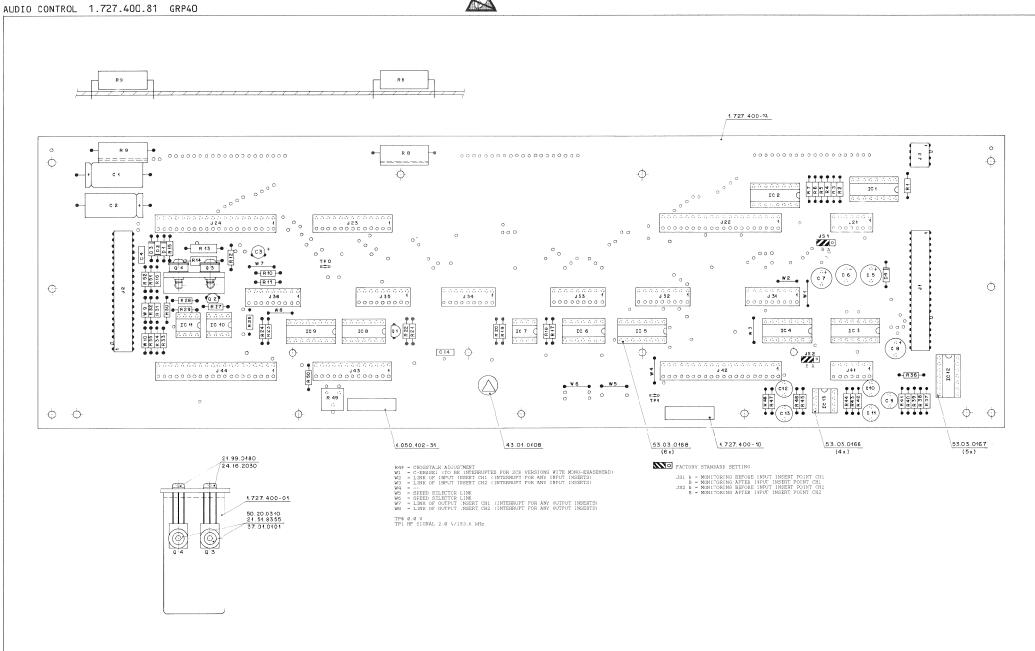
0.	P OS • NO •	PART NO.	VALUE	SPECIFICATIONS / EG		MANUF.		POS • NO •	PART NO.	VALUE	SPECIFICATIONS ,	/ EQUIVALENT	MANU
	C 2 C 4 C 5 C 6 C 7	59.25.3471 59.25.3471 59.22.3470 59.06.0104 59.22.5101 59.22.5101 59.22.5101 59.22.6100	470 UF 470 UF 47 UF 0.1 UF 100 UF 100 UF 100 UF	-20% 16 V EL -20% 16 V EL -20% 10 V EL 10% 63 V PETF -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 63 V EL	•		(00) (01)	R34 R35 R36 R37 R37 R38 R39	57-11-4104 57-11-4223 57-11-4332 57-11-4392 57-11-4332 57-11-4351 57-11-4510	100 kOhm 22 kOhm 3-3 kOhm 3-9 kOhm 3-3 kOhm 390 Ohm 51 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 10 C 11 C 12 C 13 C 14	59.05.1222 59.05.1102 59.05.1202 59.05.1222 59.05.1102 59.06.0683	2.2 nF 1 nF 1 nF 2.2 nF 1 nF 68 nF	1% 160 V PP 1% 160 V PP 10% 63 V PETE	P			R41 R42 R43 R44 R45 R46 R47	57-11-4102 57-11-4471 57-11-4332 57-11-4472 57-11-4561 57-11-4681 57-11-4332	1 kOhm 470 Dhm 3.3 kOhm 4.7 kOhm 560 Ohm 680 Ohm 3.3 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	D2 D3 D4	50.04.0125 50.04.0125 50.04.0125 50.04.0512	1N4448 1N4448 1N4448 1N5819	50V 50V 50V 30V		Mot		R48 R49 R50 R51 R52	57.11.4472 58.01.8202 57.11.4100 57.11.4102 57.11.4102	2 kOhm 10 Ohm 1 kOhm 1 kOhm	2%, 0.25W, MF Potmeter PMG 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	IC2 IC2 IC3 IC4 IC5 IC6 IC7 IC8 IC9 IC10 IC11 IC12	50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.07.0018 50.09.0107 50.09.0107 50.09.0107	MC14094 MC14094 MC14094 MC14094 MC14094 74HC00 LM393 74HC02 MC14094 RC4559 74HC74 LF333 NF5532	CMOS CMOS CMOS CMOS CMOS CMOS Oual Comparator HCMOS CMOS Dual Op. Amp- Dual Op. Amp- HCMOS Dual Op. Amp- HCMOS Dual Op. Amp- HCMOS Dual Op. Amp- HCMOS Dual Op. Amp-		Mot Mot Mot Mot Mot		TP0 TP1 W1 W3 W3 W4 W5 W6 M7 W8 W9	54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 54.01.0106 57.11.4000		PLUG 2.800.8 PLUG 2.800.8 Wire Bridge		
	J1 J2	54.01.0248 54.01.0248	20-POLE 20-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP		XIC1 XIC2	53.03.0168 53.03.0168	16 pol 16 pol	IC Socket IC Socket		
TU	DER (O	1) 87/01/08 Wth	AUDIO CON	TROL BOARD	1.727.400.00	PAGE 1	STU	0 E R (01	) 87/01/08 Wth	AUDIO COM	ITROL BOARD	1.727.400.00	PAGE
D.	P05+N0+	PART NO-	VALUE	SPECIFICATIONS / E		MA NUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS ,		MA NU
	J3 J11	54.01.0304	4-POLE	CIS Socket Strip not used		АМР		XIC3 XIC4	53.03.0168 53.03.0168	16 pol 16 pol	IC Socket IC Socket		
	J12 J21 J22 J24 J31 J32 J34 J35 J34 J34	54.01.0218 54.01.0226 54.01.0292 54.01.0229 54.01.0217 54.01.0217 54.01.0217 54.01.0217 54.01.0217 54.01.0218 54.01.0228	7-POLE 20-POLE 13-POLE 20-POLE 9-POLE 9-POLE 9-POLE 9-POLE 9-POLE 20-POLE	not used not used CIS Socket Strip CIS Socket Strip		AMP		XIC 5 XIC 6 XIC 7 XIC 8 XIC 9 XIC 10 XIC 11 XIC 12 XIC 13	53.03.0168 53.03.0167 53.03.0167 53.03.0168 53.03.0168 53.03.0166 53.03.0166 53.03.0166	16 pol 14 pol 8 pol 14 pol 16 pol 8 pol 8 pol 14 pol 8 pol	IC Socket IC Socket IC Socket IC Socket IL Socket IL Socket IC Socket IC Socket IC Socket		
	J43 hP1 MP2 MP3 MP6 MP5 MP10 MP11 MP12 MP13 MP14	56.01.0292 56.01.0286 1.727.400.11 1.727.400.10 21.99.0180 1.727.170.00 1.727.400.02 1.727.400.02 1.727.400.03 21.53.0355 24.16.2030 24.16.1030 23.01.1032 28.31.0004	13-POLE 20-POLE 1 pce 1 pce 2 pcs 2 pcs 2 pcs 1 pce 1 pce 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 4 pcs 4 pcs	CIS Socket Strip CIS Socket Strip Audio Control PCB Headsink No. label Screw M3 * 5 Revited spring Frame Tin plate Isolating plate Screw M3 * 6 Lock wacher Screw M3 * 6 Lock wacher Flat wacher Flat wacher Flat wacher		AMP St St St St St St St St		ectrolytic,	PP≅Palypropylen	, SI=Silico	n • MF=Metal Film		
	MP15 MP16	37.01.0101 43.01.0108	4 pcs 1 pce	Lock wacher ESE warning label		St St			Motorola, St-St	uder, Six=S	iliconix		
τυi	Q1 D E R (O	50.03.0436 1) 87/01/08 Wth	BC2378 AUDIO COM	BC5478, BC550B	NPN 1.727.400.00	PAGE Z			01) 87/01/08 .) 87/01/08 Wth	AUDIO CO	NTROL BOARD	1.727.400.00	PAGE
۹D.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / E	EQUIVALENT	MANUF.							
	Q 2 Q 3 Q 4	50.03.0350 50.03.0510 50.03.0495	MPF4392 BD136-16 BD135-16	J112	FET PNP NPN	Mot,Six							
	R	57-11-4332 57-11-4332 57-11-4332 57-11-4332 57-11-4332 57-11-4332 57-56-5680 57-56-5680 57-11-4102	3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 68 Ohm 68 Ohm 1 kOhm	2%, 0.25W, MF 2%, 4 W, DR 2%, 4 W, DR 2%, 4 W, DR									
	R12 R12 R14 R15 R16 R17 R18 R19	57-11-4102 57-11-4102 57-11-4103 57-13-4229 57-13-4229 57-11-4221 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-11-4103	1 kOhm 10 kOhm 2•2 Ohm 2•2 Ohm 47 Ohm 10 kOhm 10 kOhm 3•3 kOhm 3•3 kOhm 10 kOhm	24. 0.25W MF 24. 0.25W MF 24. 0.5 W MF 24. 0.5 W MF 24. 0.25W MF									
	R21 R22 R23 R24 R25 R26 R27	57.11.4103 57.11.4332 57.11.4103 57.11.4103 57.11.5106 57.11.4472 57.11.4223	10 kOhm 3-3 kOhm 10 kOhm 10 kOhm 10 MOhm 4-7 kOhm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 5%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF									



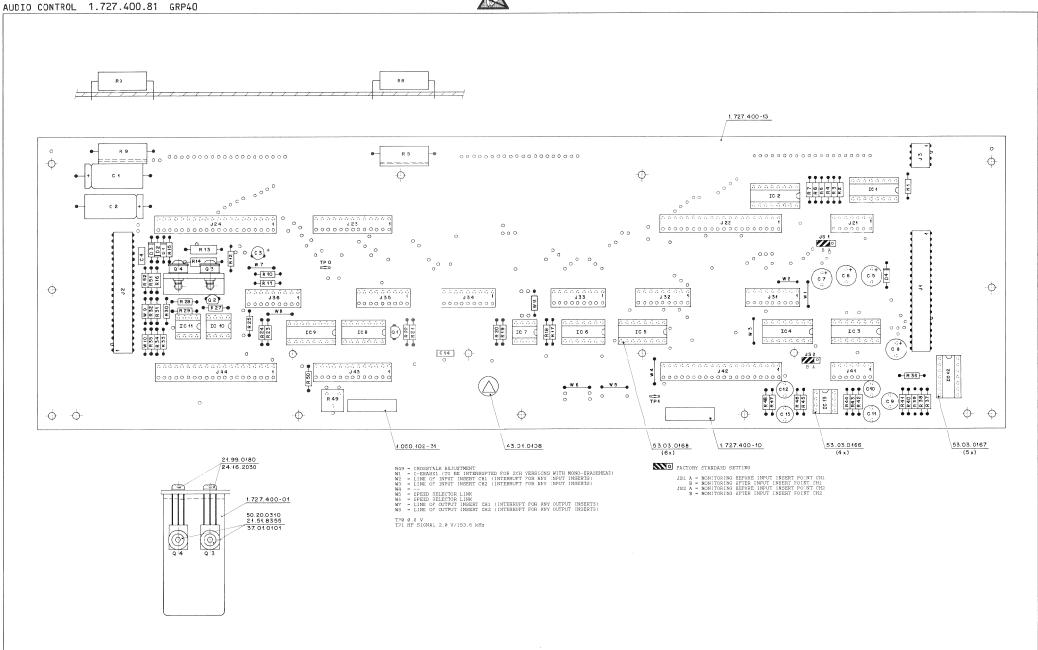
AUDIO CONTROL 1.727.400.81 GRP40

AUDIO CONTROL 1.727.400	.81 GRP4U	ALVAR.		
AS - STAR AS - STAR AS - CLK AS - OATA AS - STAR  AS - RESET	1	## 1500   1   222   342	15.0V SINC 1	32
A-PHTh3 3 4-PHTh2	13 +48.0 V L   32.4	3   120 A-4FW2	24.4. 24.4.	- IZ KEV
			STUDER AUDIO CONTROL BOARD	1.727.400.81









**STUDER A807** 7/16



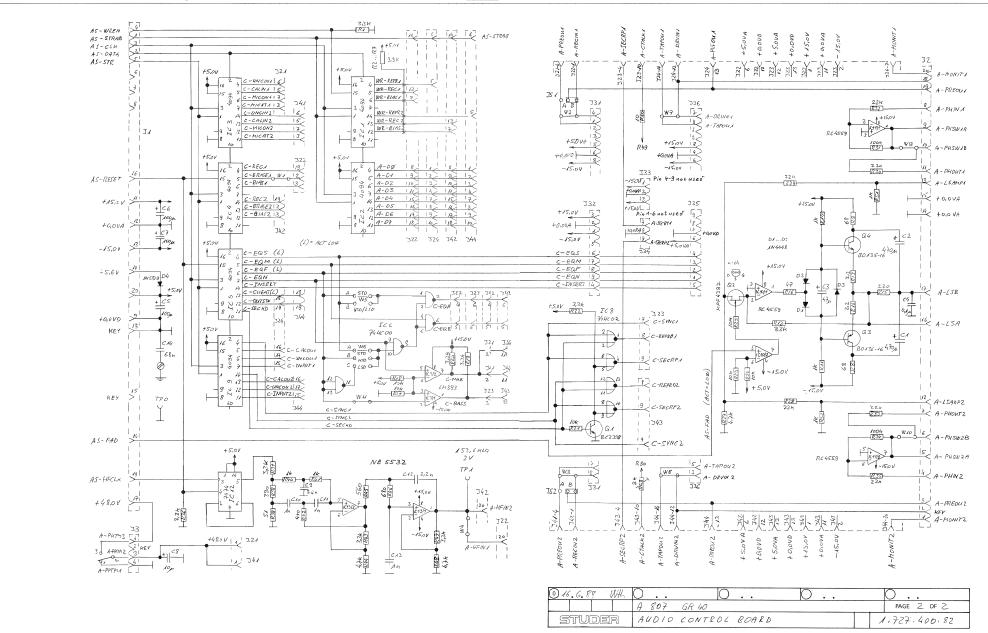
#### AUDIO CONTROL 1.727.400.81 GRP40

IND. PO	S • NO •	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	NANUF.	IND.	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	NA NUF
C. C. C. C. C. C. C.	12356789101112	59.25.3471 59.25.3471 59.22.3470 59.00.0104 59.22.5101 59.22.5101 59.22.5101 59.22.5100 59.05.1222 59.05.1102 59.05.1102 59.05.1102 59.05.1102 59.05.103	470 uF 470 uF 47 uF 0.1 uF 100 uF 100 uF 100 uF 1 uF 2.2 nF 1 nF 2.2 nF 1 nF 2.8 nF	-202 16 V EL -202 16 V EL -202 16 V EL -203 16 V EL -203 0 V EL -203 25 V EL -203 25 V EL -204 25 V EL -204 25 V EL -205 10 V PP -12 160 V PP -13 160 V PP -13 160 V PP -13 160 V PP -14 160 V PP -15 160 V PP -16 160 V PP -17 160 V PP -18 160 V PP			(ot)	R 37 R 38 R 39 R 40 R 41 R 42 R 43 R 44 R 45 R 45 R 47 R 48 R 49 R 47 R 49 R 49 R 49 R 49 R 49 R 49 R 49 R 49	57-11-4332 57-11-4391 57-11-4510 57-11-4102 57-11-4102 57-11-4471 57-11-4471 57-11-4561 57-11-4561 57-11-4561 57-11-4561 57-11-4561 57-11-4561 57-11-4102 57-11-4102	3-3 kOhr 390 Ohr 31 Ohr 1 kOhr 1 kOhr 470 Ohr 3-3 kOhr 6-7 kOhr 5-50 Ohr 6-80 Ohr 4-7 kOhr 4-7 kOhr 4-7 kOhr 4-7 kOhr 4-7 kOhr 1-8 kOhr 1-	2%, 0-25%, MF 2%, 0-25%, MF		
0. 0.	2	50.04.0125 50.04.0125 50.04.0125	184448 184448 184448 185819	50 V 50 V 50 V				R****51 R****52	57-11-4102 57-11-4102 54-02-0328	1 kOha 1 kOha	2%, 0.25%, H <sup>c</sup> 2%, 0.25%, H <sup>c</sup>		
		50-34-0512 50-37-0018 50-37-0018	185 819 MC14094 MC14094	CMOS CMOS		Mot Mot		TP0 TP1	54.02.0320 54.02.0320 64.01.0106		PLUG 2.8=0.3 PLUG 2.8=0.8 Hire Bridge		
10. 10. 10. 10. 10. 10.	1 2 3 4 5 6 7 8 9 10 11 12 13	50.37.0018 50.37.0018 50.37.0018 50.37.0018 50.37.0018 50.17.1000 50.05.0283 50.17.1002 50.97.0018 50.99.0107 50.99.0107 50.99.0107 50.99.0101 50.99.0105	MC14094 MC14094 MC14094 MC14094 MC14094 MC14094 T4HC00 MC14094 RC4559 RC4559 RC4559 T4HC74 LF153	CMGS CMGS CMGS U-1 Comparator HCPOS CMGS Du-1 Op Amp HCPOS Oual Op Amp HCPOS Oual Op Amp Oual Op Amp		Mot Mot Mot Mot Not Mot	(02)	H 2 H 3 N 4 H 5 H 6 W 7 H 8 N 9 H 10 W 11	04-01-0106 64-01-0108 64-01-0106 64-01-0106 64-01-0106 64-01-0106 64-01-0106 64-01-0106 57-11-1000 57-11-1000		Hire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge		
00) IC.	13	50.09.0101 50.09.0105	MEDADE	Dual Op. Amp. Dual Op. Amp.				XIC 2 XIC 3 XIC 4 XIC 5	53.33.0168 53.33.0168 53.33.0168	16 pol 16 pol 16 pol 16 pol 16 pol	IC Socket IC Socket IC Socket		
		54+01+C248 54-01-C248 38/01/25 With	20-POLE 20-POLE AUDIO CON	CIS Socket Strip CIS Socket Strip MTKOL BOARD	1.727.408.81	AMP AMP PAGE L	STU		53.03.0168 53.03.0168 2) 88/01/25 Wth		IC Socket IC Socket ITAOL BOARD	1.727+400+81	PAGE
ψ» PC	S = NO =	PART NO-	VALUE	SPECIFICATIONS / E	QLIVALENÍ	HANUF.	1 NO •	PDS - ND -	PART NO.	VALUE	SPECIFICATIONS	/ EDULVALENT	MANUI
J.	3	54.01.0304	4-POLE	CIS Socket Strip		АМР		XIC 6 XIC 7	53.33.0167	i4 pol			
J. J. J. J. J.		54-01-0218 54-01-0226 54-01-0292 54-01-0292 54-01-0217 54-01-0217 54-01-0217 54-01-0217 54-01-0217 54-01-0217 54-01-0218 54-01-0218	7-POLE 20-POLE 13-POLE 20-POLE 9-POLE 9-POLE 9-POLE 9-POLE 9-POLE 20-POLE 20-POLE 20-POLE	CIS Socket Strip not used not used CIS Socket Strip		A MP		XIC6 XIC7 XIC8 XIC9 XIC10 XIC11 XIC12 XIC13	53.33.0166 53.33.0166 53.33.0167 53.33.0168 53.03.0166 53.23.3166 53.33.0166	14 pol 8 pol 14 pol 16 pol 8 pol 8 pol 14 pol 8 pol	IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket		
J.	42 43 44	54.01.0292 54.01.0226	20-POLE 13-POLE 20-POLE	CIS Socket Strip		A HP A HP A HP							
JS 30) MP 32) MP MP MP	2 1 1 1 1	54.01.0021 54.01.0021 -727.400.12 -727.400.13 -727.400.10 21.99.0180 21.53.0355 24.16.2030	1 pce 1 pce 1 pce 1 pce 2 pcs 2 pcs 2 pcs 4 pcs 1 pce 6 pcs	Bridge Audio Control PCB Audio Control PCB Audio Control PCB Hoadsink No. label Screw M3 * 5 Screw M3 * 8 Lock wacher Lock wächer ESE warning label Contact pin		St St St St	(0)	lo Ano Juone	channel				
	7	37-31-0101 43-31-0108 54-31-0020	4 pcs 1 pce 6 pcs	Lock wacher ESE warning label Contact pin		St St			changed of PCB changed PP=Polypropylen	, S1=Silicon	. MF=Metal Film		
Q.	••••1 ••••2 ••••3	50.03.0436 50.03.0350 50.03.0510 50.03.0495	BC2378 MPF4392 BD136-16 B0135-16	BC5478, BC5508 J112	NPN FET PNP NPN	Mot.Six	MANUFA	CTURER: Not:	=Motorala, St=St	uder. Six=Si	1 iconi x		
		50.03.0495 88/01/25 Wth		NTROL BOARD	NPN 1.727.400.81	PAGE 2			(01) 87/01/08 2) 88/01/25 Wth			1 - 72 7 - 400 - 81	PAGE
NO. PO	IS + N3 +	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	NANUF.							
R •	2	57-11-+332 57-11-+332	3.3 kOhm 3.3 kOhm	21. 0.25%, MF 22. 0.25%, MF 23. 0.25%, MF 23. 0.25%, MF 24. 0.25%, MF									
R. R.	2 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 11 22 23	97.11.432 97.11.432 97.11.432 97.11.432 97.11.432 97.11.432 97.11.432 97.11.432 97.11.432 97.13.422 97.13.422 97.13.422 97.13.422 97.13.422 97.13.422 97.13.423 97.13.423 97.13.423 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433 97.14.433	3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 3.3 kOhm 3.6 Ohm 1 kOhm 1 kOhm 1 kOhm 2.2 Ohm 2.2 Ohm 2.2 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R. R. R.	9	57-56-5680 57-56-5680 57-11-+102	5.3 KUNM 68 Ohm 68 Ohm 1 kOhm	2%, G.25W, MF 2%, 4 W, DR 2%, 4 W, DR 2%, G.25H, MF									
R. R. R.	11 12 13	57-11-+102 57-11-+103 57-13-+229 57-13-+229	1 kOhm 10 kOhm 2.2 Ohm 2.2 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.5 M, MF 2%, 0.5 N, MF									
R. K. K.	l5 l6 l7	57-11-4221 57-11-4470 57-11-4103 57-11-4103		2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF									
R. R. R.	20 21	57-11-4332 57-11-4332 57-11-4103 57-11-4332	10 k0hm 10 k0hm 3-3 k0hm 3-3 k0hm 10 k0hm 3-3 k0hm 10 k0hm 10 k0hm 10 k0hm	2%: 0,25%; MF									
R.			10 kühm 10 kühm 10 Mühm	2%, 0.25%, MF 2%, 0.25%, MF 5%, 0.25%, MF									
	•••26	57.11.4472 57.11.4223	4.7 kOhm 22 kOhm	2% 0-25W MF									
R.	•••28	57+11+4223	22 KUNB	2%, 0.25W, MF									
R R R R	28 29 30 31 32	57-11-4223 57-11-4221 57-11-4104 57-11-4223 57-11-4221	22 kUhi 220 Uhi 100 kUhi 22 kUhi 220 Uhin	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF									
R R R R R R	28 29 30 31 32 33 34 35	57-11-4223 57-11-4221 57-11-4104 57-11-4223	4.7 kOhm 22 kOhm 22 kOhn 220 Ohn 100 kOhn 22 kOhn 220 Ohn 100 kOhn 22 kOhn 3-3 kOhn 3-9 kOhn	2%, 0.25M, MF 2%, 0.25M, MF									



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AUDIO CONTROL 1.727.400.82 GRP40





AUDIO CONTROL 1.727.400.82 GRP40 1.727.400-13 00000000000000000000 00000000000000000000 0000000000000000000000 Φ 0 0 -0-IC ( IC 2 C 2 J23 1 J22 0 ● R 10 ● ● R11 ● Φ. 0 7 0 0 0 0 0 J 36 000000000 J35 1 J33 4 J32 1 F 28 Q 2 000000000 00000000 00000000 9 W 8 R24 R23 IC 9 IC 8 IC 7 IC 6 IC 5 1C 3 ¢в ф JS 2 C14 0 0 0 ● R36 ● 0000000 R 49 0 Φ-0 0  $\phi$ -0-4.050.402 - 34 43.01.0108 53.03.0468 (6x) 1.727.400-10 53.03.0166 53.03.0167 21.99.0180 R49 = CROSSTALK ADJUSTMENT
W/2 = C-EMASH\_CONTROL (INTERRUPT FOR ANY INFUT INSERTS)
W/3 = C-EMASH\_CONTROL (INTERRUPT FOR ANY INFUT INSERTS)
W/4 = LINK OF INFUT INSERT CHI (INTERRUPT FOR ANY INFUT INSERTS)
W/4 = SFEED SELECTOR LINK
W/4 = SFEED SELECTOR LINK
W/5 = SFEED SELECTOR LINK
W/7 = LINK OF OUTPUT INSERT CHI INTERRUPT FOR ANY OUTPUT INSERTS) 24.16.2030 FACTORY STANDARD SETTING JS1 & - MONITORING BEFORE INPUT INSERT POINT CH1
B - MONITORING AFTER INPUT INSERT POINT CH1
JS2 & - MONITORING BEFORE INPUT INSERT POINT CH2
B - MCNITORING AFTER INPUT INSERT POINT CH2 C#A 1.727.400-01 50.20.0310 21.51.8355 TP0 0.0 V TP1 HF SIGNAL 2.0 V/153.6 kHz 37.01.0101

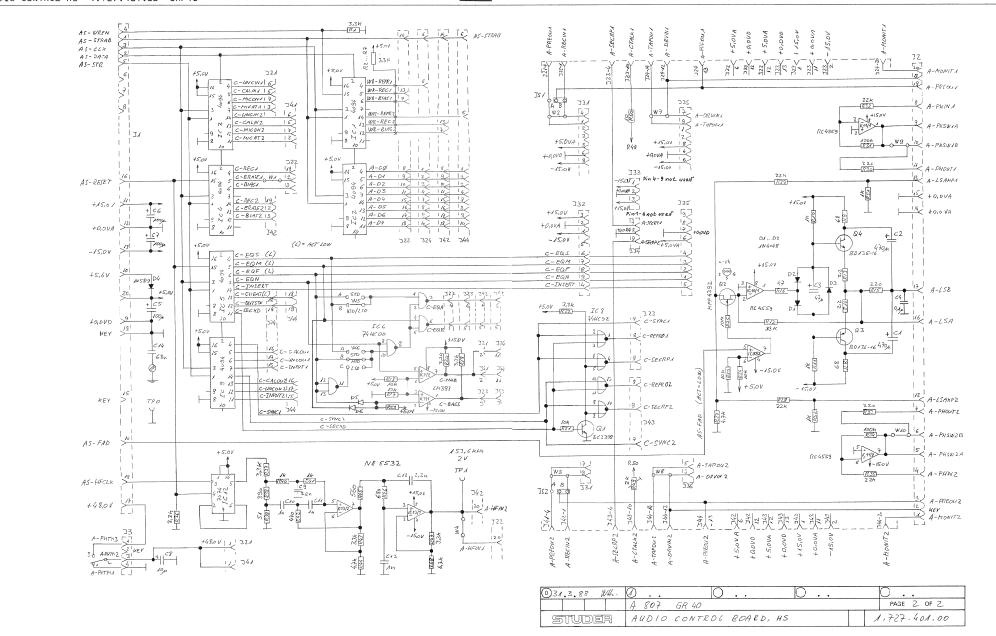


## AUDIO CONTROL 1.727.400.82 GRP40

C1 C2 C3	PART NO.											
C • • • • 3	59.25.3471	VALUE 	SPECIFICATIONS / E	QUI VALENT	MA NUF •	IND.	XIC7	PART NO." 53.03.0166	8 pol	IC Socket	/ EQUIVALENT	MANUF
C 4	59.22.3470 59.06.0104	470 uF 47 uF 0.1 uF 100 uF	-20% 16 V EL -20% 10 V EL 10% 63 V PET -20% 25 V EL	Р			XIC9 XIC10 XIC11	53.03.0167 53.03.0168 53.03.0166 53.03.0166	14 pol 16 pol 8 pol 8 pol	IC Socket IC Socket IC Socket IC Socket		
C 6 C 7 C 8	59.22.5101 7 59.22.5101	100 uF 100 uF 100 uF	-20% 25 V EL -20% 25 V EL -20% 63 V EL				XIC12 XIC13	53.03.0167 53.03.0166	14 pol 8 pol	IC Socket IC Socket		
C • • • • • 9 C • • • • 10 C • • • • 11	59.05.1222 59.05.1102 59.05.1102	2.2 nF 1 nF 1 nF	1% 160 V PP 1% 160 V PP 1% 160 V PP									
C12 C13 C14	3 59.05.1102	2•2 nF 1 nF 68 nF	1% 160 V PP 1% 160 V PP 10% 63 V PET	Р								
D2 D3	2 50.04.0125	1N4448 1N4448 1N4448	50 V 50 V 50 V									
IC4	50.07.0018	1N5819 MC14094 MC14094	30V CMOS CMOS		Mot Mot Mot							
IC4 IC4	50.07.0018 50.07.0018	MC14094 MC14094 MC14094	CMOS CMOS CMOS		Mot Mot Mot							
IC 6 IC 7 IC 8	7 50.05.0283 50.17.1002	74HE00 LM393 74HE02	HCMOS Dual Comparator HCMOS		Mot							
IC 9 IC 10 IC 11 IC 12	50.09.0107 50.09.0107	MC14094 RC4559 RC4559 74HC74	CMOS Dual Op. Amp. Dual Op. Amp. HCMOS		HOL	EL=Ele	ctrolytic.	PP=Polypropylen	SI=Silicon	, MF=Metal Film		
IC13 J1	3 50.09.0105 1 54.01.0248	NE 5532 20-POLE	Dual Op. Amp. CIS Socket Strip		AMP	PETP=P	olyester,	Motorola, St=Stu				
J2 J3		20-POLE 4-POLE	CIS Socket Strip CIS Socket Strip TROL BOARD	1.727.400.82	AMP AMP		8/03/28	) 88/03/28 Wth	AUDIO COA	TROL BOARD	1 = 727 = 400 = 82	PAGE
	(**, **, **, **						·					
). POS.NO	PART NO.	VALUE	SPECIFICATIONS / E	EQUIVALENT	MANUF.	I ND .	POS.NO.	PART NO.	VALUE	SPECIFICATIONS		MA NL
J1 J1 J1	z 3		not used not used not used				R 38 R 39 R 40	57.11.3391 57.11.3510 57.11.3102	390 Ohm 51 Ohm 1 kOhm	2%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF		
J • • • • 2 J • • • • 2 J • • • • 2	2 54.01.0226 3 54.01.0292	7-POLE 20-POLE 13-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP AMP		R • • • • • • 42 R • • • • • 43	57-11-3102 57-11-3471 57-11-3332 57-11-3472	1 kOhm 470 Ohm 3.3 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
J3. J3. J3	1 54.01.0217 2 54.01.0217	20-POLE 9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP		R • • • • 44 R • • • • 45 R • • • • 46 R • • • • 47	57-11-3561 57-11-3681 57-11-3332	560 Ohm 680 Ohm 3.3 kGhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
J3: J3:	4 54.01.0217 5 54.01.0217 6 54.01.0217	9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP		R48 R49 R50	57-11-3472 58-01-8202 57-11-3100	4.7 kOhm 2 kOhm 10 Ohm	2%, 0.25W, MF Potmeter PMG 2%, 0.25W, MF		
J4 J4 J4	2 54.01.0226 3 54.01.0292	7-POLE 20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP AMP AMP		R****52 TP****0	57-11-3102 57-11-3102 54-02-0320	1 kOhm 1 kOhm	2%, 0.25W, Mf 2%, 0.25W, Mf PLUG 2.8÷0.8		
J***** J\$**** J\$****	1 54.01.0021	20-FOLE	Bridge Bridge				TP1	54.02.0320 64.01.0106		PLUG Z.8≉0.8 Wire Bridge		
MP	2 1.727.400.01	l pce 1 pce	Audio Control PCE Headsink	3	St St St		W2 W4 W4	64.01.0106 64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge Wire Bridge		
MP MP MP	4 21.99.0180 5 21.53.0355	1 pce 2 pcs 2 pcs 2 pcs 2 pcs	No⊷ label Screw M3 ≠ 5 Screw M3 ≠ 8 Lock wacher		30		W6 W7 W8	64.01.0106 64.01.0106 64.01.0106		Wire Bridge Wire Bridge Wire Bridge		
MP MP	7 37.01.0101 8 43.01.0108	4 pcs 1 pce 6 pcs	Lock wacher ESE warning labe! Contact pin	1	St St		W9 W10 W11	57-11-4000 57-11-4000 57-11-4000		Wire Bridge Wire Bridge Wire Bridge		
Q	2 50.03.0350	BC237B MPF4392 BD136-16	BC547B+ BC550B J112	NPN FET PNP	Mot,Six		XIC 2 XIC 3	53.03.0168 53.03.0168 53.03.0168	16 pol 16 pol 16 pol	IC Socket IC Socket IC Socket		
Q	4 50.03.0495	80135-16 3.3 kOhm	2%, 0.25W, MF	NPN			XIC 4 XIC 5 XIC 6	53.03.0168 53.03.0168 53.03.0167	16 pol 16 pol 14 pol	IC Socket IC Socket IC Socket		
I U D E R	(00) 88/03/28 WEN	AUDIO CO	NTROL BOARD	1 • 72 7 • 400 • 82	PAGE 2	STU	D E R (0	0) 88/03/28 Wth	AUDIO CO	NTROL BOARD	1-727-400-82	PAGE

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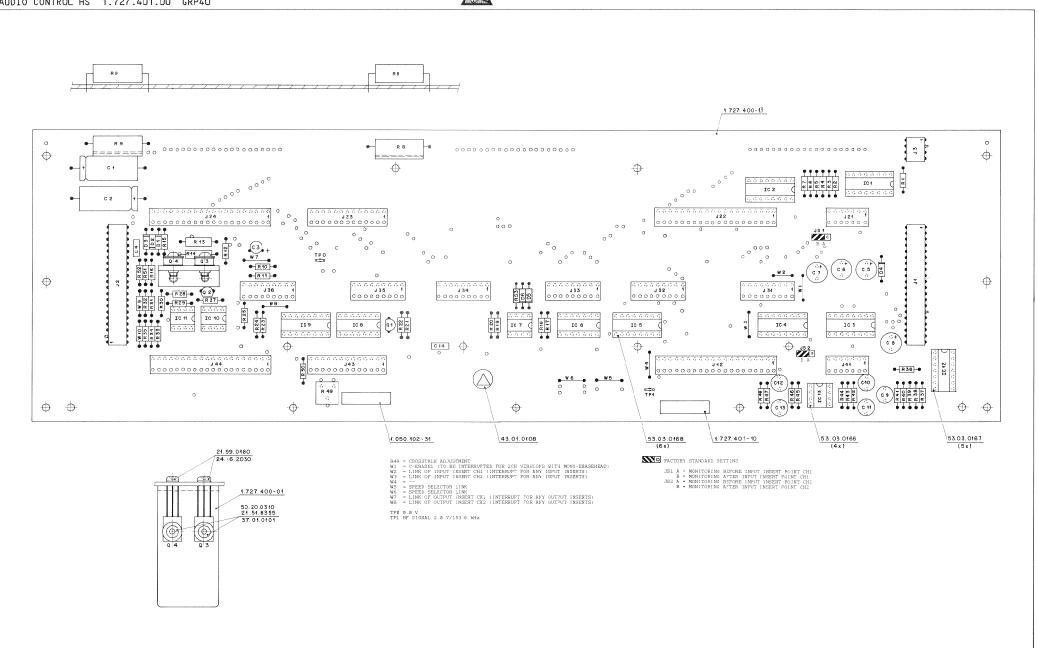






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AUDIO CONTROL HS 1.727.401.00 GRP40

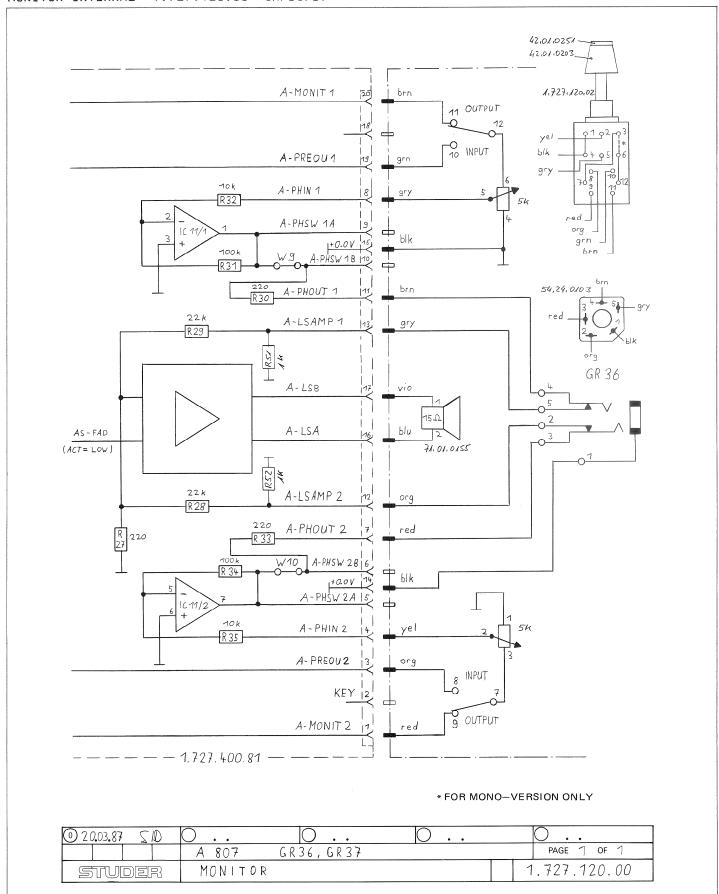




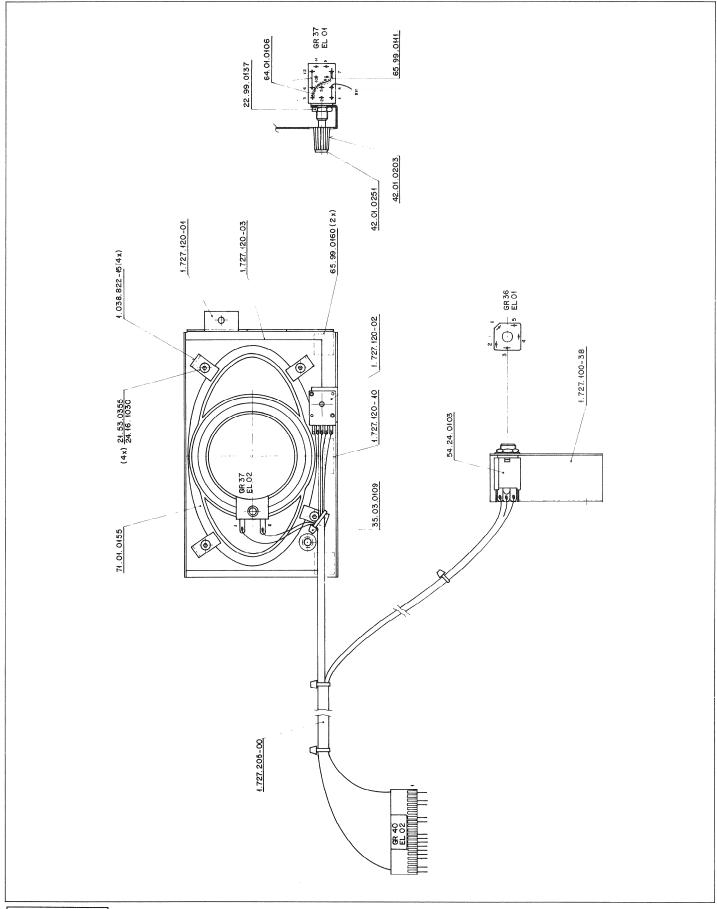
## AUDIO CONTROL HS 1.727.401.00 GRP40

D.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EG	UIVALENT	MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS /	/ EQUIVALENT	MANUF
	C 1 C 2	59.25.3471 59.25.3471	470 uF 470 uF	-20% 16 V EL -20% 16 V EL				R37 R38	57.11.3332 57.11.3391	3.3 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 4	59.22.3470 59.06.0104	47 uF 0.1 uF 100 uF	-20% 10 V EL 10% 63 V PETF -20% 25 V FI	•			R 40 R 41	57-11-3510 57-11-3102 57-11-3102	51 Ohm 1 kOhm 1 kOhm	1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C 5 C 6 C 7	59.22.5101 59.22.5101 59.22.5101	100 uF 100 uF	-20% 25 V EL -20% 25 V EL				R 42 R 43	57.11.3471 57.11.3332	470 Ohm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	C 0 C 9 C 10	59.05.1222 59.05.1102	10 uF 2•2 nF 1 nF	-20% 63 V EL 1% 160 V PP 1% 160 V PP				R45 R46	57-11-3472 57-11-3561 57-11-3681	4-7 kOhm 560 Ohm 680 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	C12	59.05.1102 59.05.1222	1 nF 2.2 nF	1% 160 V PP 1% 160 V PP				R47 R48 R49	57-11-3332 57-11-3472 58-01-8202	3.3 kOhm 4.7 kOhm 2 kOhm	2%, 0,25W, MF 2%, 0,25W, MF Potmeter PMG		
	C13 C14	59.05.1102 59.06.0683	1 nF 68 nF	1% 160 V PP 10% 63 V PETF	,			R50 R51	57-11-3100 57-11-3102	10 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, Mf		
	D 2 D 3 D 4	50.04.0125 50.04.0125 50.04.0125 50.04.0512	1N4448 1N4448 1N4448 1N5819	50V 50V 50V 30V		Mot.		R52 R53	57-11-3102 57-11-3332 54-02-0320	1 kOhm 3.3 kUhm	2%, 0.25W, MF 2%, 0.25W, MF PLUG 2.800.8		
	D6	50.04.0125 50.04.0125	1N4448 1N4448	50V 50V				TP1	54.02.0320 64.01.0106		PLUG 2.8≑0.8 Wire Bridge		
	IC2	50.07.0018 50.07.0018 50.07.0018	MC14094 MC14094 MC14094	CMOS CMOS CMOS		Mot Mot Mot		W3 W4	64-01-0106 64-01-0106 64-01-0106		Wire Bridge Wire Bridge Wire Bridge		
	IC3 IC4 IC5	50.07.0018 50.07.0018	MC14094 MC14094	C MOS C MOS		Mot Mot		W	64.01.0106 64.01.0106		Wire Bridge Wire Bridge		
	IC6 IC7 IC8	50.17.1000 50.05.0283 50.17.1002	7411C00 LM393 74HC02	HCMOS Qual Comparator HCMOS				W7 W8 W9	64.01.0106 64.01.0106 57.11.4000		Wire Bridge Wire Bridge Wire Bridge		
	IC9 IC10	50.07.0018 50.09.0107	MC14094 RC4559	CMOS Dual Op. Amp.		Mot		W10	57-11-4000		Wire Bridge		
	IC 12 IC 13	50.09.0107 50.17.1074 50.09.0105	RC4559 74HC74 NE5532	Dual Op. Amp. HCMUS Dual Op. Amp.				XIC2 XIC3	53.03.0168 53.03.0168 53.03.0168	16 pol 16 pol 16 pol	IC Socket IC Socket IC Socket		
	J1	54.01.0248	20-POLE	CIS Socket Strip		AMP		XIC4 XIC5	53.03.0168 53.03.0168	16 pol 16 pol	IC Socket IC Socket		
TU	D E R (01	) 88/03/28 With	AUDIO CON	TROL BOARD HS	1.727.401.00	PAGE 1	STU	D E R (01	) 88/03/28 Wth	AUDIO COM	ITROL BOARD HS	1.727.401.00	PAGE
D.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EC	QUIVALENT	MA NU F •	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANUI
	J2 J3 J11 J12	54-01-0248 54-01-0304	20-POLE 4-POLE	CIS Socket Strip CIS Socket Strip not used not used		AMP AMP		XIC6 XIC7 XIC8 XIC9	53.03.0167 53.03.0166 53.03.0167 53.03.0168	14 pol 8 pol 14 pol 16 pol	IC Socket IC Socket IC Socket IC Socket		
	J13 J21	54.01.0218	7-POLE	not used CIS Socket Strip		AMP AMP		XIC10 XIC11	53.03.0166 53.03.0166 53.03.0167	8 pol 8 pol 14 pol	IC Socket IC Socket IC Socket		
	J23 J24	54.01.0226 54.01.0292 54.01.0226	20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP		XIC12 XIC13	53.03.0166	8 pol	IC Socket		
	J31 J32	54.01.0217 54.01.0217	9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP AMP							
	J33 J34 J35	54.01.0217 54.01.0217 54.01.0217	9-POLE 9-POLE 9-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP							
	J36 J41	54.01.0217 54.01.0218	9-POLE 7-POLE	CIS Socket Strip CIS Socket Strip		AMP AMP AMP							
	J43 J44	54.01.0226 54.01.0292 54.01.0226	20-POLE 13-POLE 20-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		AMP AMP							
	JS1	54-01-0021		Bridge Bridge									
	JS2 MP1	54.01.0021 1.727.400.13	1 pce	Audio Control PCB		St							
	MP • • • • 2 MP • • • • 3	1.727.400.01	1 pce 1 pce 2 pcs	Headsink No. label Screw M3 ♦ 5		St St							
	MP5 MP6	21.99.0180 21.53.0355 24.16.2030	2 pcs 2 pcs	Screw M3 ≈ 8 Lock wacher			(01)	8.03.1988	Sensibility ext	ension			
	MP7 MP8	37.01.0101 43.01.0108	4 pcs 1 pce 6 pcs	Lock wacher ESE warning label Contact pin		St St	EL=E1e	ctrolytic,	PP=Polypropyler	ı, SI=Silico	n , MF=Metal Film		
	MP9	54.01.0020 50.03.0436	8C237B	BC547B+ BC550B	NPN		PETP=F	olyester,					
	Q3 Q4	50.03.0350 50.03.0510 50.03.0495	MPF4392 BD136-16 BD135-16	J112	FET PNP NPN	Mot.Six			=Motorola, St=St (01) 88/03/28	uder, 51x=5	111COUIX		
тυ		) 88/03/28 Wth		TROL BOARD HS	1.727.401.00	PAGE 2	STU	D E R (0	l) 88/03/28 Wth	AUDIO CO	NTROL BOARD HS	1.727.401.00	PAGE
iD •	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / E	QUIVALENT	MANUF.							
	R 2 R 3	57.11.3332 57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R 5	57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R	57.11.3332 57.11.3332 57.56.5680	3.3 kOhm 3.3 kOhm 68 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 4 W, DR									
	R9 R10	57.56.5680 57.11.3102	68 Ohm 1 kOhm	2%, 4 W, DR 2%, 0.25W, MF									
00)	R12 R12	57-11-3102 57-11-3103 57-11-3333	1 kOhm 10 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
,	R13 R14	57.13.3229 57.13.3229	2.2 Ohm 2.2 Ohm	2%, 0.5 W, MF 2%, 0.5 W, MF									
	R15 R16 R17	57-11-3221 57-11-3470 57-11-3103	220 Ohm 47 Ohm 10 kOhm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF									
	R19	57-11-3103 57-11-3332	10 kOhm 3-3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R • • • • 20 R • • • • 21 R • • • • 22	57 • 11 • 3332 57 • 11 • 3103 57 • 11 • 3332	3.3 kOhm 10 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R • • • • 23 R • • • • 24	57•11•3103 57•11•3103	10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R25 R26 R27	57.11.5106 57.11.3472	10 M0hm 4.7 k0hm	5%, 0.25W, MF not used 2%, 0.25W, MF									
	R 28 R 29	57.11.3223 57.11.3223	22 kOhm 22 kOhm 220 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
	R30 R31 R32	57•11•3221 57•11•3104 57•11•3223	100 kOhm 22 kOhm	2%+ 0.25W+ MF 2%+ 0.25W+ MF									
	R • • • • 33	57.11.3221 57.11.3104	220 Ohm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF									
	R 34 R 35	57-11-3223	22 kOhm	2% 0.25W. MF									

#### MONITOR INTERNAL 1.727.120.00 GRP36/37



## MONITOR INTERNAL 1.727.120.00 GRP36/37



- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

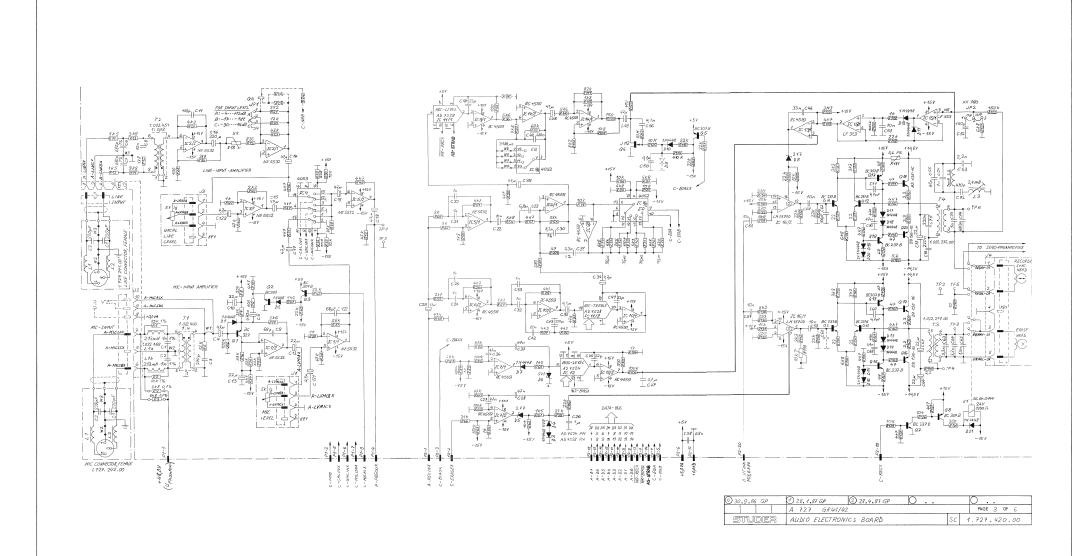
A807

- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)





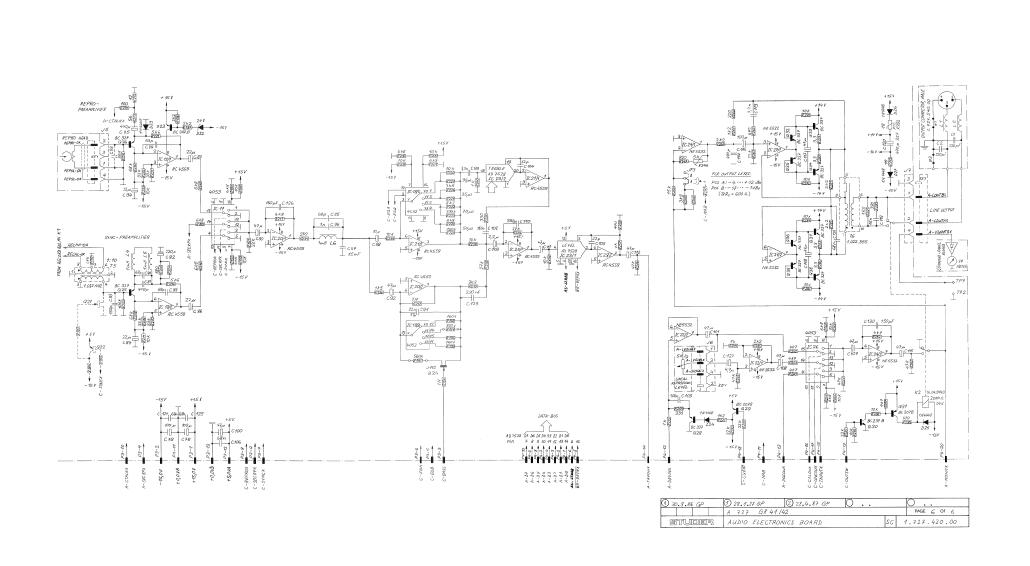
7/27



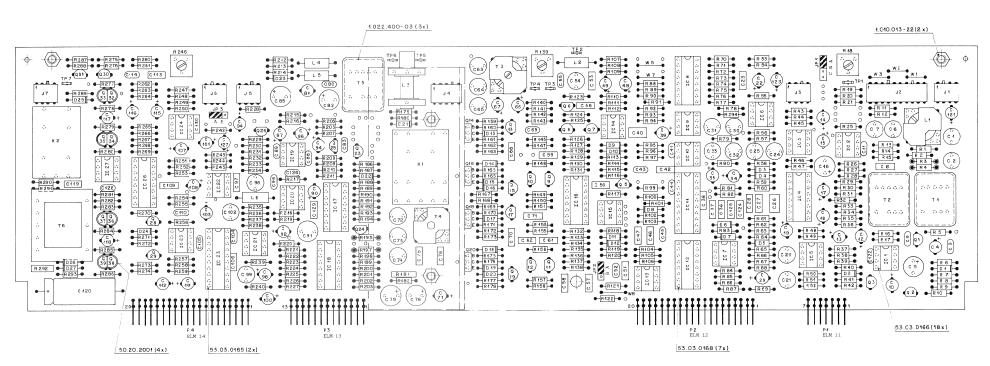
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
- MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)

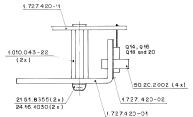


7/28









FACTORY STANDARD SETTING

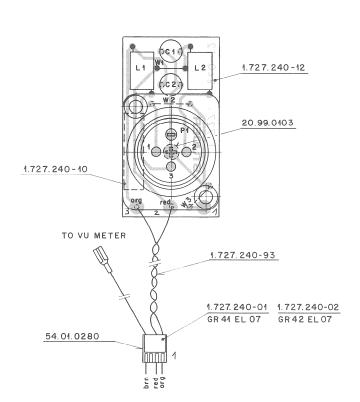


CLIFICATIONS / EQUIVALENT MANUFACTOR   12. 0. 2.20.4 NF   1. 0. 2.
NICS 83ARU 1.727.420.00 PAGE 1
ECIFICATIONS / EQUIVALENT MANUF
not used 2%. 0.25%, MF 2%. 0.25%, MF 2%. 0.25%, MF 3%. 0.25% MF
22 0 . 2.29 M FE 22 0 . 2.29 M FE 23 0 . 2.29 M FE 24 0 . 2.29 M FE 24 0 . 2.29 M FE 25 0 . 2.29 M FE 26 0 . 2.29 M FE 27 0 . 2.29 M FE 28 0 . 2.29 M FE
2, 0.25 M ME 25, 0.25 M ME 25, 0.25 M ME 25, 0.25 M ME 25, 0.25 M ME
2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 3%, 0.25W, MF
12. 0.25N. MF 12. 0.25N. MF 12. 0.25N. MF 12. 0.25N. MF 12. 0.25N. MF
12. 0.25%, MF 12. 0.25%, MF 12. 0.25%, MF 12. 0.25%, MF 12. 0.25%, MF 12. 0.25%, MF 12. 0.25%, MF
ECIFICATIONS / EQUIVALENT MANUF 22, 0.25h. MF 23, 0.25h. MF
3. 0.25M. MF 3. 0.25M. MF 3. 0.5 M. MP 2. 0.5 M. PMG 2. 0.25M. MF
22 0 - 20 4 ME 22 0 - 20 4 ME 23 0 - 20 4 ME 24 0 - 20 4 ME 25 0 - 20 4 ME 26 0 - 20 4 ME 27 0 - 20 4 ME 28 0 -
.%, 0.254, ME :%, 0.254, ME 2%, 0.254, ME 2%, 0.254, ME 2%, 0.254, ME
13. 0.4294 MF 13. 0.2594 MF 23. 0.2594 MF 23. 0.2594 MF 23. 0.2594 MF 23. 0.2594 MF
.%, 0.25H, MF !%, 0.25H, MF ?%, 0.25H, MF ?%, 0.25H, MF ?%, 0.25H, MF
22. 0.25% MF 23. 0.25% MF 24. 0.25% MF 25. 0.25% MF
2%, 0.25%, MF ONICS BOARD 1.727.420.00 PAGE 1
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ND.	P05.N0.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALE	NT MANUF	IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	R177 R178 R179 R180 R181 R182 R183 R184 R184	57.11.4680 57.11.4682 57.11.4473 57.11.4100 57.99.0209 57.11.4569	68 Ohm 6.8 KOhm 47 KOhm 10 Ohm 5.6 Ohm 5.6 Ohm	2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF 2%, 0.25M, MF PTC 2%, 0.25M, MF not used not used not used			R***286 R***287 R***286 R***289 R***291 R***291 R***292 R***293 R***294	57-11-4339 57-11-4472 57-11-4103 57-11-4471 57-11-4391 57-11-4152 57-92-1151 57-11-4180 57-11-470	3.3 Ohm 4.7 kOhm 10 kOhm 470 Ohm 390 Ohm 1.5 kOhm 18 Ohm 47 Uhm	2%, 0.25% MF 2%, 0.25% MF	
	R186 R187 R188 R189 R190 R191 R192	57.11.4222 57.11.4222 57.11.4103 57.11.4682 57.11.4682 57.11.4682 57.11.4682	2.2 k0hm 2.2 k0hm 10 k0hm 6.8 k0hm 6.8 k0hm 22 k0hm 6.8 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			T • • • • • 1 T • • • • • 2 T • • • • • 3 T • • • • • 4 T • • • • • 5 T • • • • • 6	1.022.400.00 1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:4 1:0.62	Mic Input Trafo Line Input Trafo Erase Trafo Bias Trafo Sync Trafo Line Output Trafo	St St St St St
00) 01)	R193 R194 R195 R196 R197 R198 R199	57-11-4103 57-11-4105 57-11-4564 57-11-4824 57-11-3164 57-11-3164	10 k0hm 1 M8hm 560 k0hm 820 k0hm 160 k0hm 160 k0hm	2%, 0.25W, MF 2%, 0.25W, MF, with soc not used 2%, 0.25W, MF, with soc 2%, 0.25W, MF, with soc 2%, 0.25W, MF			TP • • • • 2 TP • • • • 2 TP • • • • 4 TP • • • • 5 TP • • • • 6	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8	4A 4A 4A 4A 4A 4A
	R200 R201 R202 R203 R204 R205 R205 R206	57.11.4103 57.11.4682 57.11.4682 57.11.4103 57.11.4181 57.11.4562 57.11.4104	10 kOhm 6.8 kOhm 6.8 kOhm 10 kOhm 180 Ohm 5.6 kOhm 100 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			W 1 W 2 W 3 W 4 W 5 W 6 W 7	54.01.0106 64.01.0106 64.01.0106 64.01.0106		wire Bridge Wire Bridge wire Bridge not used wire Bridge not used wire Bridge	
	R208 R209 R210 R211 R212	57-11-4683 57-11-4333 57-11-4333 57-11-4103 57-11-4120	68 kOhm 33 kOhm 33 kOhm 10 kOhm 12 Ohm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF			XIC 1 XIC 2 XIC 3	64.01.0106 53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	Wire Bridge IC Socket IC Socket IC Socket	
τυ	D E R (02	) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD 1.7	27•420•00 PAGE 1	3 ST	JDER (C	02) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD 1.727.420.0	IO PAGE
											MANU
.0 •	POS+NO+ R+++213 R+++214	PART NO. 57.11.4560 57.11.4101	VALUE 	2%, 0.25W, MF 2%, 0.25W, MF	NT MANUF		POS - NO - XIC 4 XIC 5	PART NO. 53.03.0166 53.03.0166	8-Pole 8-Pole	SPECIFICATIONS / EQUIVALENT  IC Socket IC Socket	MANU
	R215 R216 R217 R218 R219 R220 R221	57.11.4682 57.11.4682 57.11.4682 57.11.4105 57.11.4332 57.11.4103	6.8 kOhm 6.8 kOhm 6.8 kOhm 1 MOhm 3.3 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF not used			XIC6 XIC7 XIC8 XIC9 XIC10 XIC11 XIC12	53.03.0166 53.03.0166 53.03.0168 53.03.0166 53.03.0166 53.03.0165 53.03.0168	8-Pole 8-Pole 16-Pole 8-Pole 20-Pole 16-Pole 8-Pole	IC Socket	
	R222 R223 R224 R225 R226 R227	57-11-4522 57-11-4334 57-11-4682 57-11-4154 57-11-4392 57-11-4563	6.2 kOhm 330 kOhm 6.8 kOhm 150 kOhm 3.9 kOhm	2% 0.25% MF not used 2% 0.25% MF			XIC 13 XIC 14 XIC 15 XIC 16 XIC 17 XIC 18 XIC 19	53.03.0166 53.03.0166 53.03.0166 53.03.0168 53.03.0168 53.03.0168 53.03.0168	8-Pole 8-Pole 16-Pole 16-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket IC Socket	
00)	R 229 R 230 R 231 R 232 R 233 R 234 R 235	57.11.4562 57.11.4683 57.11.4333 57.11.4333 57.11.4103 57.11.4470 57.11.4271	5.6 kOhm 68 kOhm 33 kOhm 33 kOhm 10 kOhm 47 Ohm 270 Ohm 27 kOhm	2%, 0.25% MF 2%, 0.25% MF 2%, 0.25% MF 2%, 0.25% MF 2%, 0.25% MF 2%, 0.25% MF 2%, 0.25% MF			XIC 20 XIC 21 XIC 22 XIC 23 XIC 25 XIC 26 XIC 27	53.03.0166 53.03.0166 53.03.0165 53.03.0165 53.03.0166 53.03.0166 53.03.0168 53.03.0168	8-Pole 8-Pole 8-Pole 20-Pole 8-Pole 8-Pole 16-Pole 8-Pole	IC Socket	
	R 2 3 5 R 2 3 7 R 2 3 8 R 2 3 9 R 2 4 0 R 2 4 1 R 2 4 2	57-11-4152 57-11-4152 57-11-4331 57-11-4103 57-11-4102 57-11-4472	1.5 kOhm 330 Ohm 10 kOhm 10 kOhm 1 kOhm	2%, 0.25%, MF not used 2%, 0.25%, MF			XR3 XR4	53.03.0221 53.03.0221	2-Pole 2-Pole	R3/R4 Socket R3/R4 Socket	
	R 243 R 244 R 245 R 246 R 247 R 248	57.11.4473 57.11.4102 57.11.4222 58.01.8502 57.11.4821 57.11.4392	47 kOhm 1 kOhm 2•2 kOhm 5 kOhm 820 Ohm 3•9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5 W, PMG 2%, 0.25%, MF 2%, 0.25%, MF					Water St	ECTRONICS BOARD 1-727-420-C	DA BACE
ΤU	0 E R (02	) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD 1.7	727.420.00 PAGE :	4 511	JDER (	02) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD 1.727.420.C	JU PAGE
ND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVAL		- IND-	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
	R • • • 249 R • • • 250 R • • • 251	57.11.4153 57.11.4473	15 kOhm 47 kOhm	not used 2%, 0.25W, MF 2%, 0.25W, MF		(02)	87/04/28 b	etter frequency etter S/N ratio			
	R • • • 252 R • • • 253 R • • • 254	57-11-4472 57-11-4472 57-11-4331	4.7 k0hm 4.7 k0hm 330 0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		Note	U (V)		PART NO. 1		
	R255	57.11.4102	1 kOhm	20 25 1						5.8 kOhm 0.1 % 0.25 W MF	
	R255 R256 R257 R258 R259	57.11.4102 57.11.4273 57.11.4102 57.11.4471 57.11.4103	27 kOhm 1 kOhm 470 Ohm 10 kOhm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF			24 12	R 3 / R 4     R 3 / R 4	57990199	4.3 kOhm 0.1 % 0.25 W MF 680 Ohm 0.1 % 0.25 W MF	
	R255 R256 R257 R258 R259 R260 R261 R262	57.11.4273 57.11.4102 57.11.4471 57.11.4103 57.11.4221 57.11.4122 57.11.4471	27 kOhm 1 kOhm 470 Ohm 10 kOhm 220 Ohm 1+2 kOhm 470 Ohm	2%, 0.25%, MF		PP	24 12 = Ceramic = Polypropy FACTURER: A	EL = Elect len MF = Metal	57990199   6 rolytic PE Film SI ices Inc.	680 Ohm 0.1 % 0.25 W MF  TP = Polyester	
	R	57.11.4273 57.11.4401 57.11.4401 57.11.4103 57.11.4221 57.11.4223 57.11.4223 57.11.4223 57.11.403 57.11.4103 57.11.4682	27 kOhm 1 kOhm 470 Ohm 10 kOhm 220 Ohm 1-2 kOhm 470 Chm 22 kOhm 47 kOhm 47 kOhm 10 kOhm 6-8 kOhm 6-8 kOhm	2%, 0.25% MF		PP	24 12 = Ceramic = Polypropy FACTURER: A N	R 3 / R 4     R 3 / R 4     EL = Elect   len MF = Metal	57990199   6 rolytic PE Film SI ices Inc.	680 Ohm 0-1 % 0-25 W MF  IP = Polyester = Silicon Mot - Motorola	
	R. 255 R. 257 R. 257 R. 258 R. 259 R. 260 R. 261 R. 263 R. 263 R. 263 R. 263 R. 263 R. 263 R. 263 R. 263 R. 263 R. 264 R. 265 R. 267 R. 268 R. 269 R. 270 R. 271 R. 272 R. 272	57.11.4273 57.11.4102 57.11.4103 57.11.4103 57.11.4103 57.11.4221 57.11.4223 57.11.4223 57.11.403 57.11.4682 57.11.4682 57.11.4682 57.11.4683 57.11.4103 57.11.4103	27 kOhm 1 kOhm 470 Ohm 20 Ohm 1-2 kOhm 470 Ohm 22 kOhm 22 kOhm 22 kOhm 47 kOhm 10 kOhm 12 kOhm 22 kOhm 22 kOhm 24 kOhm 25 kOhm 26 kOhm 26 kOhm 27 kOhm 28 kOhm	2%, 0.25%, MF		PP	24 12 = Ceramic = Polypropy FACTURER: A N	R 3 / R 4     R 3 / R 4     EL = Elect   len MF = Metal   DI = Analog Dev   S = National S	57990199   6 rolytic PE Film SI ices Inc.	680 Ohm 0.1 % 0.25 W MF  TP = Polyester	
	R. 255 R. 250 R. 257 R. 258 R. 258 R. 260 R. 261 R. 261 R. 263 R. 264 R. 263 R. 264 R. 265 R. 267 R. 267 R. 271 R. 271	57.11.4273 57.11.4410 57.11.4410 57.11.4410 57.11.4410 57.11.422 57.11.422 57.11.4422 57.11.4403 57.11.4403 57.11.4403 57.11.4403 57.11.44103 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4233 57.11.4233 57.11.4233 57.11.44103 57.11.44103	27 kOhm 1 kOhm 470 Ohm 470 Ohm 200 Ohm 1-2 kOhm 470 Ohm 470 Ohm 470 Ohm 470 kOhm 6-8 kOhm 6-8 kOhm 1-2 kOhm 47 kOhm 1-2 kOhm 47 kOhm 47 kOhm 22 kOhm 22 kOhm 22 kOhm 22 kOhm 23 kOhm 24 kOhm 25 kOhm 26 kOhm 27 kOhm 28 kOhm 28 kOhm 29 kOhm 20 kOhm 20 kOhm 31 Ohm 31 kOhm 31 kOhm 31 kOhm	2%, 0.25%, ME 2%, 0.25%, MF		PP	24 12 = Ceramic = Polypropy FACTURER: A N	R 3 / R 4     R 3 / R 4     EL = Elect   len MF = Metal   DI = Analog Dev   S = National S	57990199   6 rolytic PE Film SI ices Inc.	680 Ohm 0.1 % 0.25 W MF  TP = Polyester	
	R. 259 K. 259 K. 259 K. 250 K. 250 K. 251 K.	57.11.4273 57.11.4471 57.11.4471 57.11.4471 57.11.4271 57.11.4271 57.11.4272 57.11.4471 57.11.4222 57.11.4473 57.11.4223 57.11.4472 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223 57.11.4223	27 kOhm 1 kOhm 470 Ohm 470 Ohm 10 kOhm 20 Ohm 470 Ohm 470 Ohm 470 Ohm 470 Ohm 471 kOhm 471 kOhm 471 kOhm 471 kOhm 471 kOhm 471 kOhm 472 kOhm 122 kOhm 471 kOhm 122 kOhm 124 kOhm 125 kOhm 126 kOhm 137 kOhm 138 Ohm 147 kOhm 148 kOhm 158 kOhm 168 kOhm 178 kOhm 178 kOhm 188 kOh	2%, 0.25%, MF		PP	24 12 = Ceramic = Polypropy FACTURER: A N	R 3 / R 4     R 3 / R 4     EL = Elect   len MF = Metal   DI = Analog Dev   S = National S	57990199   6 rolytic PE Film SI ices Inc.	680 Ohm 0.1 % 0.25 W MF  TP = Polyester	
	R. 259 K. 259 R. 259 R. 250 R. 250 R. 250 R. 260 R.	57.11.4273 57.11.4471 57.11.4471 57.11.4471 57.11.422 57.11.4473 57.11.4403 57.11.4403 57.11.4403 57.11.4403 57.11.4403 57.11.4403 57.11.4403 57.11.4422 57.11.4473 57.11.4423 57.11.4423 57.11.4423 57.11.4433 57.11.44339 57.11.4103	27 kOhm 1 kOhm 470 Ohm 470 Ohm 220 Ohm 1-2 kOhm 4-2 kOhm 4-2 kOhm 4-2 kOhm 10 kOhm 6-8 kOhm 10 kOhm 6-8 kOhm 10 kOhm	2*, 0.25%, MF	727 <b>-4</b> 20.00 PAGE	PP MANL ORIG	24 12 = Cercaic = Polypropy FACTUKEK: A N S	R 3 / R 4     R 3 / R 4     EL = Elect   len MF = Metal   DI = Analog Dev   S = National S	Transport of the conductors of the cond	FP = Polyester = Silicon Met	00 845%

LINE OUTPUT CONNECTOR 1.727.240.00 GRP01 ELM09/10 (DIAGRAM: AUDIO ELECTRONICS PCBs)



MA NU F.	TIONS / EQUIVALENT	SPEC IF I	VALUE	PART NO.	POS.NO.	I ND •
	30V PP	1 %	220 pF	59.05.1221	C1	
	30V PP	1 %	220 pF	59.05.1221	C * * * * * Z	
Ph	ence Coil, Note 1	Interf		62.01.0115	L 1	
Ph	ence Coil, Note 1	Interf		62.01.0115	L 2	
St	onnector PCB	Output	1 pcs	1.727.240.11	MPl	(00)
St	onnector PCB	Output	1 pcs	1.727.240.12	MPl	(01)
St	io Connector	Li-L A	1 pcs	1.727.240.93	MP2	
	D 2.2 * 5	Screw	1 pcs	20.99.0103	MP 3	
AMP	e	CIS. C	4 po1	54.01.0280	MP 4	
St	1	Nr. La	1 pcs	1-727-240-10	MP * * * * 5	
Neu	e	XLR . M		54.21.2001	P • • • • 1	
	dqe	Wire B		1.010.323.64	W1	
	dge	Wire B		1.010.324.64	W2	
	dge	Wire B		1.010.323.64	W 3	

Note 1: Philips 4312 020 36700

PP=Polypropylen

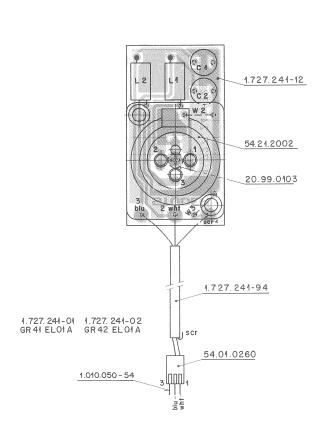
MANUFACTURER: AMP+AMP, Neu=Neutrik, Ph=Philips, St=Studer

ORIG 86/08/08 (01) 87/02/19

S T U D E R (01) 37/02/19 GP OUTPUT CONNECTOR, MALE

1.727.240.00 PAGE 1

# LINE INPUT CONNECTOR 1.727.241.00 GRP01 ELM11/12 (DIAGRAM: AUDIO ELECTRONICS PCBs)



INO.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F .
	C 1	59.05.1221	220 pF	1 % 630V PP	
	C Z	59.05.1221	220 pF	1 % 630V PP	
	J 1	54.21.2002		XLR, Female,	Neu
	L 1	02.01.0115		Interference Coil, Note 1	Ph
	L * * * * Z	62.01.0115		Interference Coil, Note 1	Ph
(00)	MPl	1.727.241.11	1 pcs	Line Connector PCB	St
(01)	MP 1	1.727.241.12	1 pcs	Line Connector PCB	St
	MP * * * * 2	1.727.241.94	1 pcs	KA-L Line Connector	St
	MP 3	20+99+0103	1 pcs	Screw D 2+2	
	MP 4	54.01.0260	3 pol	CIS, Case	AMP
	MP 5	1.010.050.54	1 pcs	CIS. Plug	AMP
	MP 6	1.727.241.10	l pcs	Nr. Label	St
	W 2	1.010.323.64		Wire Bridge	
	W3	1.010.323.64		Wire Bridge	

Note 1: Philips 4312 020 36700

PP=Polypropylen,

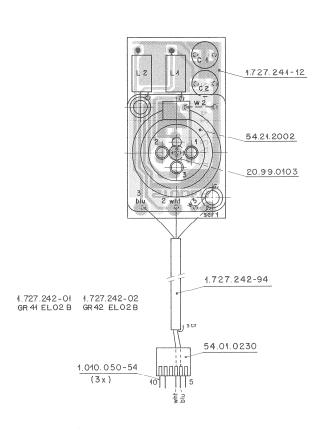
MANUFACTURER: AMP=AMP. Neu=Neutrik. Ph=Philips. St=Studer

ORIG 86/08/08 (01) 87/02/19

S T U D E 9 (01) 87/02/19 GP LINE CONNECTOR+ FEMALE 1.727.241.00 PAGE 1

MIC INPUT CONNECTOR 1.727.242.00 GRP01 ELM13/14

(DIAGRAM: AUDIO ELECTRONICS PCBs)



MANUF.	SPECIFICATIONS / EQUIVALENT	VALUE	PART NO.	POS.NO.	IND.
	1 % 630V PP	220 pf	59.05.1221	C * * * * * 1	
	1 % 630V PP	220 pF	59.05.1221	C • • • • 2	
Neu	XLR, Female,		54.21.2002	J * * * * * 1	
Ph	Interference Coil, Note 1		62.01.0115	L 1	
Ph	Interference Coil, Note 1		62.01.0115	LZ	
St	Mic Connector PCB	1 pcs	1-727-241-11	MP1	(00)
St	Mic Connector PCB	1 pcs	1 - 727 - 241 - 12	MP 1	(01)
St	KA-L Mic Connector	1 pcs	1.727.242.94	MP 2	
	Screw D 2.2   5	1 pcs	20.99.0103	MP	
AMP	CIS, Case	6 pol	54-01-0230	MP 4	
AMP	CIS + Plug	3 pcs	1.010.050.54	MP 5	
St	Nr. Label	1 pcs	1.727.242.10	MP6	
	Wire Bridge		1.010.323.64	W Z	
	Wire Bridge		1-010-323-64	H 3	
					( )

Note 1: Philips 4312 020 36700

PP=Polypropylen\*

MANUFACTURER:AMP=AMP, Neu=Neutrik, Ph= Philips, St=Studer

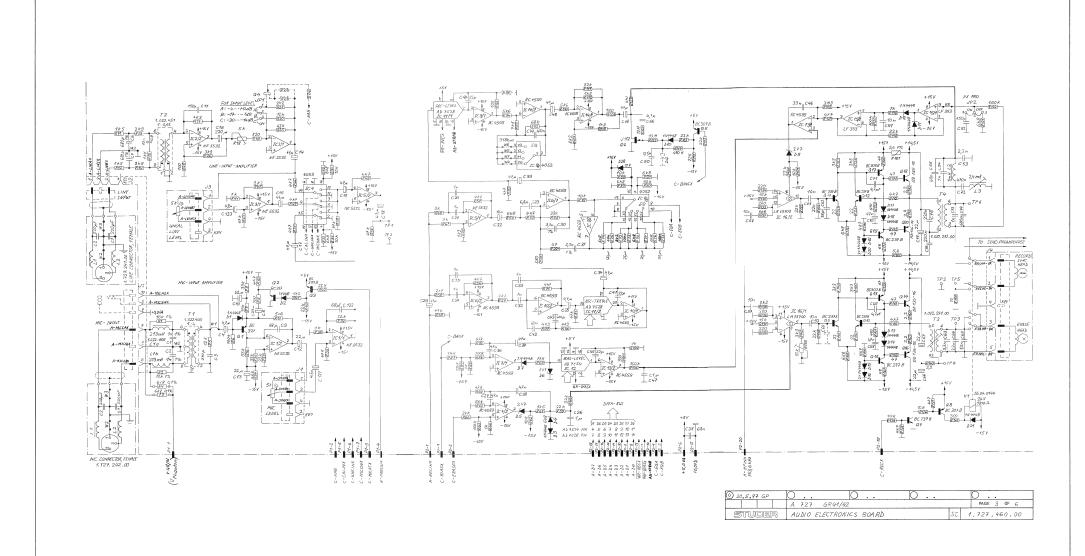
ORIG 86/08/08 (01) 87/02/19

S T U D E R (01) 87/02/19 GP MIC CONNECTOR. FEMALE

1 • 72 7 • 242 • 00 PAGE 1

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
- MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)



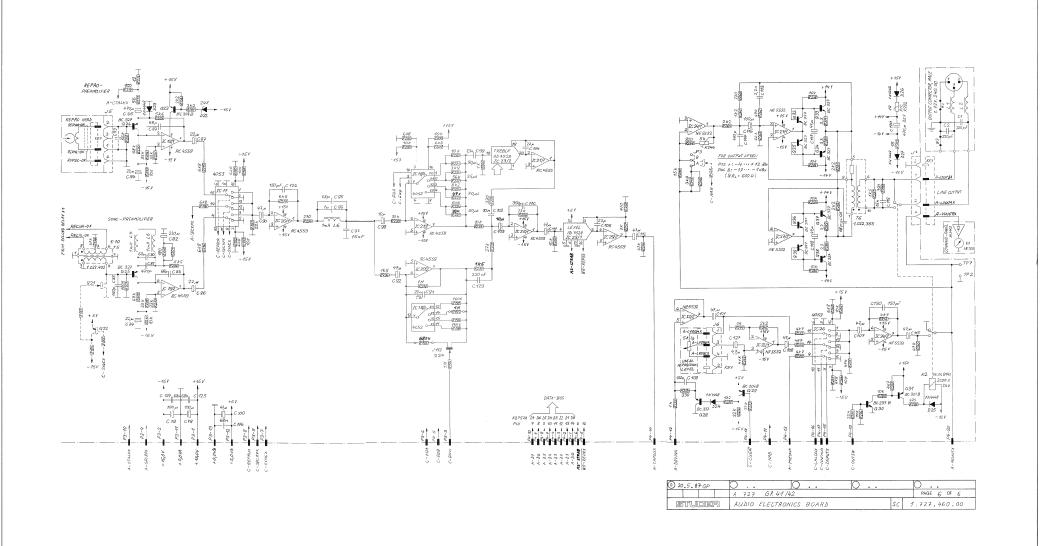


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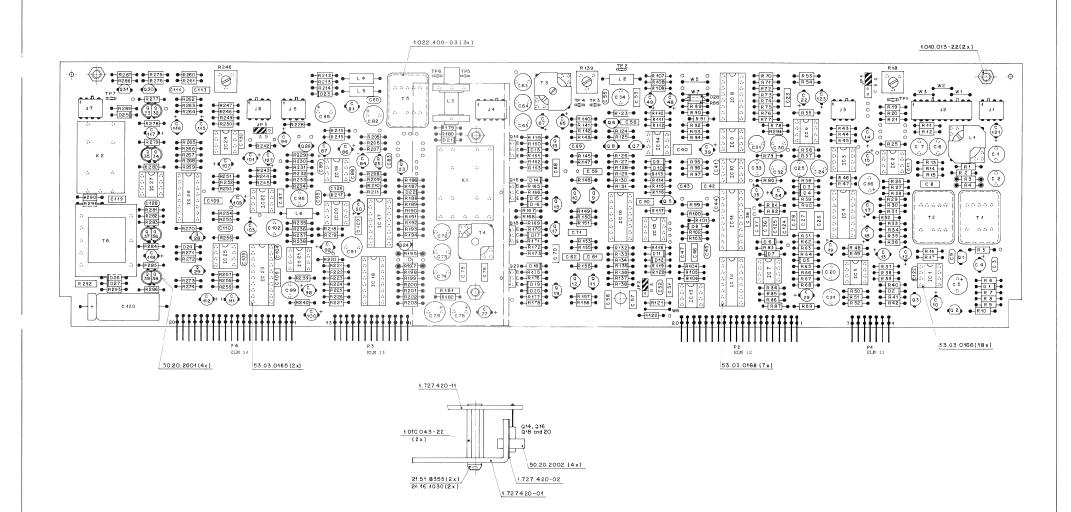
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- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)
- MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)





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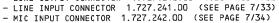
TODAY CELEGINORES (TOTAL CONTINUE CONTI			
ING. POSENG. PIRT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. FOS.HO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	THO. POS.NO. PART NO. WALUE SPECIFICATIONS / EQUIVALENT MANUF.
C. 1 30-05-1102 1 nf 11 50V PP  (-2 30-05-1102 1 nf 12 50V PP	C112 99-22-3470 47 uF -203 10V Exp  C112 99-22-3470 47 uF -203 10V Ger  C15 99-22-3470 47 uF -203 10V Ger  C15 99-22-3473 47 uF -203 10V Exp  C15 99-22-3473 47 uF -203 10V Exp  C16 99-22-3473 47 uF -203 10V Exp  C17 99-22-3470 47 uF -203 10V Exp  C18 99-22-3471 470 uF -203 10V Exp  C18 99-22-3471 470 uF -203 10V Exp  C18 99-22-3471 470 uF -203 10V Exp  C18 99-23-3471 470 uF -203 10V Exp  C18 99-33-3481 100 uF -203 10V Exp	N=  1.010-010-22   2 pcs	853 97.11.4154 190 KDNn 22. 0.2544 MB 865 97.11.410-2 10 KDNn 22. 0.2544 MB 865 97.11.410-2 10 KDNn 22. 0.2544 MB 865 97.11.410-2 10 KDNn 22. 0.2544 MB 867 97.11.410-2 10 KDNn 22. 0.2544 MB 867 97.11.410-2 10 KDNn 22. 0.2544 MB 867 97.11.410-2 10 KDNn 22. 0.2544 MB 870 97.11.410-2 10 KDNn 22. 0.2544 MB 871 97.11.410-2 10 KDNn 22. 0.2544 MB 872 97.11.410-2 10 KDNn 22. 0.2544 MB 873 97.11.410-2 10 KDNn 22. 0.2544 MB 874 97.11.410-2 10 KDNn 22. 0.2544 MB 875 97.11.410-2 10 KDNn 22. 0.2544 MB 875 97.11.410-2 10 KDNn 22. 0.2544 MB 876 97.11.410-3 10 KDNn 22. 0.2544 MB 877 97.11.410-3 10 KDNn 22. 0.2544 MB
C	0	0 5 0.0 3.0 915	8
C33 90-95-2102 1 nF 2.56 50V PP C4 93-12-4070 4.1 UF -208 33V EL C5 93-12-4070 4.1 UF -208 33V EL C5 93-12-4070 4.1 UF -208 33V EL C5 93-12-408-4071 4.7 UF -208 33V EL C7 90-60-4073 4.7 UF -208 32V PEP STUDER (CO) \$77-69/20 GP AUDIO ELECTRONICS BOARD 1.727-460-00 FAGE 1	30 Solvettis reviewd visit of the second v	020 50.03.9310 00139-12 not used no	1 T U D E R (00) 07/05/20 GP AUDIO ELECTRUNICS SOARD 1-727-460-00 PAGE 10
IND. POLING. PART NO. VALUE SPECIFICATIONS / ISUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND- P35-NG- PART NO. VALUE SPECIFICATIONS / EUUIVALENT MAME.	INO. POS.KO. PAAT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C38 59-66-0583 68 DF 103 50W PFTP		U?? 50.03.0515 8C3078 8C5571 RC568B NPN U30 50.03.04516 EC2378 8C5474 RC5980 NPN U11 50.03.0451 8C3078 8C5474 RC5980 NPN U12 50.03.0451 8C3078 8C5578 RC5650 NPN U12 50.03.0515 8C337 matched with 033 NPN U12 50.03.0515 8C337 matched with 033 NPN u12	R100 97-11-4223 22 kOhn 2%- 0-25w- MF R101 37-11-4103 10 kOhn 2%- 0-25w- 4F R102 37-11-2332 1-3 kOhn 3%- 0-25w- 4F
C	B	030 50:03.00:25 00.327 matched with 039: may 039 50:03.00:25 00.327 matched with 039: may natched with 0	
C	10	\$\$1.11                              \qquad  \qquad \qquad \qquad \qqqq \qqqqq \qqqqqq	\$1.15   57.11.4223   22 kDTm   22.0.150   4F    \$1.15   57.11.421   470 kDTm   23.0.150   4F    \$1.15   57.11.422   470 kDTm
IND. POS.NO. PLAT NO. VALUE SPECIFICATIONS / FOUTVALENT MANUF-	(NO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS.NG. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS-NO. PART NO. YALLE SPECIFICATIONS / EQUIVALENT MANUF.
C5 99.86.0224 220 nf 10t 5CV PETP  C5 19.86.0224 220 nf 10t 5CV PETPP  C5 19.86.0224 220 nf 10t 5CV PETPP  C5 19.86.0224 220 nf 10t 5CV PETPP  C5 19.86.0224 220 nf 10t 5CV PETPPP  C5 19.86.0244 120 nf 10t 5CV PETPPPP  C5 19.86.0244 120 nf 10t 5CV PETPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPPP	1026   36.02.0015   NC 14093   CR05 Analog Switch   Mot	R 26	### 133 97-11-4082
C	t	\$ 22 \$7-11.4001	\$\begin{array}{c c c c c c c c c c c c c c c c c c c
The control of the	## 1 94.01.0020 4 pcs Contact Fin JFI  ## 2 54.01.0020 3 pcs Contact Fin JFI  ## 3 54.01.0020 3 pcs Contact Fin JFI  ## 3 54.01.0020 3 pcs Contact Fin JFI  ## 2 54.01.0020 3 pcs Contact Fin JFI  ## 2 54.01.0020 3 pcs Seven Masher  ## 2 54.01.0020 2 pcs Seven Masher  ## 3 54.01.0020 4 pcs Contact Fin JFI  ## 3 54.01.0020 5 pcs Seven Masher  ## 3 127.14.002 1 pcs Seven Masher  ## 1 127.14.002 1 pcs Thereoplastic Seven Masher  ## 1 127.14.002 1 pcs Thereoplastic Seven Masher  ## 1 127.14.003 3 pcs Seven Masher  ## 1 127.14.003 5even Mash	\$\( \cdot \c	### A



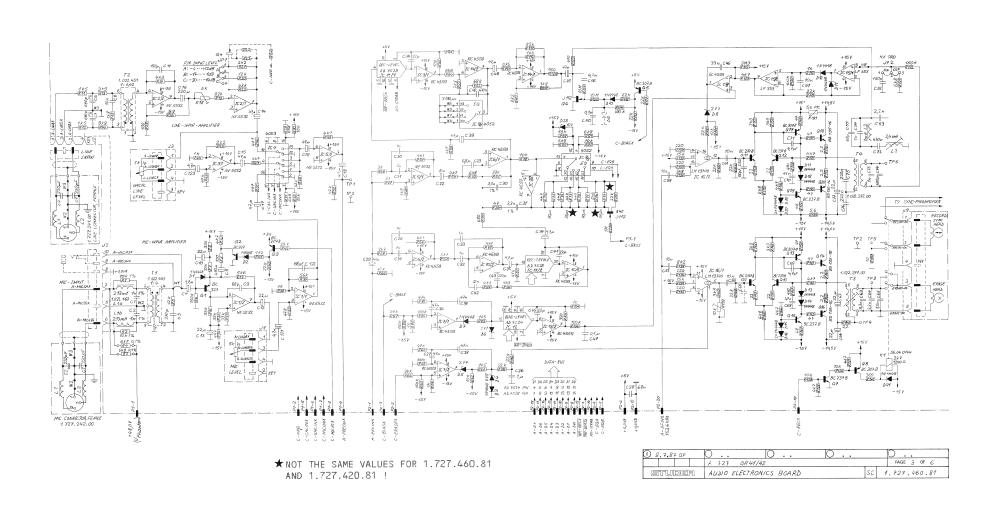
	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS•NO•	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAN
	R180 R181 R182 R183	57.11.4100 57.99.0209 57.11.4569	10 Ohm 5.6 Ohm 5.6 Ohm	2%, 0.25W, MF PTC 2%, 0.25W, MF not used			R***291 R***292 R***293 R***294	57.11.4152 57.92.1151 57.11.4180 57.11.4470	1.5 kOhm 18 Ohm 18 Ohm 47 Ohm	2%, 0.25W, MF 150mA, PTC 2%, 0.25W, MF 2%, 0.25W, MF	
	R184 R185 R186 R187 R188 R189	57.11.4222 57.11.4222 57.11.4103 57.11.4682	2.2 kOhm 2.2 kOhm 10 kOhm 6.8 kOhm	not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			T • • • • • 1 T • • • • • 2 T • • • • • 4 T • • • • • 5	1.022.400.00 1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00	1:4 1:0.62	Mic Input Trafo Line Input Trafo Erase Trafo Bias Trafo Sync Trafo	S S S S
	R190 R191 R192 R193 R194	57-11-4682 57-11-4223 57-11-4682 57-11-4103 57-11-4105 57-11-4684	6.8 kOhm 22 kOhm 6.8 kOhm 10 kOhm 1 MOhm 680 kOhm	2%. G-25H. MF 2%, O-25H. MF 2%, O-25H. MF 2%, O-25H. MF 2%, O-25H. MF 2%, O-25H. MF, with socket			TP6 TP2 TP3 TP4	1-022-355-00 54-02-0320 54-02-0320 54-02-0320 54-02-0320		line Output Trafo Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8	S A A A
	R195 R196 R197 R198 R199 R200	57-11-4105 57-11-3164 57-11-3164 57-11-4103	1 MOhm 160 kOhm 160 kOhm 100 kOhm	not used 2%, 0-25W, MF, with socket 2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF			TP5 TP7	54-02-0320 54-02-0320 54-02-0320 54-02-0320		Plug 2-8°0-8 Plug 2-8°0-8 Plug 2-8°0-8 Wire Bridge	A A
	R • • • 201 R • • • 202 R • • • 203 R • • • 204 R • • • 205	57.11.4682 57.11.4682 57.11.4103 57.11.4181	6.8 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF not used 2%, 0.25M, MF			W 2 W 4 W 5 W 6	64.01.0106 64.01.0106		Wire Bridge Wire Bridge not used Wire Bridge not used	
	R • • • 206 R • • • 207 R • • • 208 R • • • 209	57.11.4562 57.11.4104 57.11.4683 57.11.4333	5.6 kOhm 100 kOhm 68 kOhm 33 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			W8 XIC1	64.01.0106 64.01.0106 53.03.0166	8- <b>Pol</b> e	Wire Bridge Wire Bridge IC Socket	
	R210 R211 R212 R213	57.11.4333 57.11.4103 57.11.4120 57.11.4560 57.11.4101	33 kOhm 10 kOhm 12 Ohm 56 Ohm 100 Ohm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF			XIC 2 XIC 3 XIC 4 XIC 5 XIC 6	53.03.0166 53.03.0168 53.03.0166 53.03.0166 53.03.0166	8-Pole 16-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket	
T 11	R214 R215 R216	57-11-4682 57-11-4682 57-11-4682	6.8 kOhm 6.8 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF ECTRONICS BOARD 1.727.460.00	PAGE 13	5 T II	XIC8	53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket IC Socket ECTRONICS BOARD 1-727-460-0	n page
1 0	D E K (00	) 87/05/20 GP	AUDIU EL	1.727.460.00	PAGE 13	5 1 0	оек <b>(</b> 0	0) 87/05/20 GP	AUDIO EL	ECTRUNICS BUARD 1.672.F.446U.oU	D PAGE
) <b>.</b>	PDS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INO.	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAM
	R217 R218 R219 R220	57-11-4682 57-11-4105 57-11-4152 57-11-4103	6.8 kOhm 1 MOhm 1.5 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF not used			XIC9 XIC10 XIC11 XIC12 XIC13	53.03.0166 53.03.0166 53.03.0165 53.03.0168 53.03.0166	8-Pole 8-Pole 20-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket	
	R • • • 221 R • • • 222 R • • • 223 R • • • 224 R • • • 225	57.11.4822 57.11.4473 57.11.4682 57.11.4393	8.2 kOhm 47 kOhm 6.8 kOhm 39 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC - 14 XIC - 15 XIC - 16 XIC - 17	53.03.0166 53.03.0166 53.03.0168 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket IC Socket IC Socket	
	R 226 R 227 R 228 R 229	57.11.4392 57.11.4563 57.11.4563 57.11.4562	3.9 kOhm 56 kOhm 56 kOhm 5.6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC18 XIC19 XIC20 XIC21	53.03.0168 53.03.0166 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket	
	R 230 R 231 R 232 R 233	57.11.4683 57.11.4333 57.11.4333 57.11.4103	68 kOhm 33 kOhm 33 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC 22 XIC 23 XIC 24 XIC 25	53.03.0166 53.03.0165 53.03.0166 53.03.0166	8-Pole 20-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket	
	R234 R235 R236 R237	57-11-4271 57-11-4273 57-11-4152 57-11-4331	270 Ohm 27 kOhm 1.5 kOhm 330 Ohm	2 % 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC26 XIC27 XR3	53.03.0168 53.03.0166 53.03.0221	16-Pole 8-Pole 2-Pole	IC Socket IC Socket R3/R4 Socket	
	R • • • 238 R • • • 239 R • • • 240 R • • • 241	57.11.4103 57.11.4103 57.11.4102	10 kOhm 10 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF not used			XR4	53-03-0221	2-Pole	R3/R4 Socket	
	R • • • 242 R • • • 243 R • • • 244 R • • • 245	57.11.4472 57.11.4473 57.11.4102 57.11.4222	4.7 kOhm 47 kOhm 1 kOhm 2.2 kOhm	2% 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
	R • • • 246 R • • • 247 R • • • 248 R • • • 249	58.01.8502 57.11.4821 57.11.4392	5 kOhm 820 Ohm 3•9 kOhm 15 kOhm	10%, 0.5 H, PMG 2%, 0.25W, MF 2%, 0.25W, MF not used 2%, 0.25W, MF							
	R***250 R***251 R***252 R***253	57.11.4153 57.11.4473 57.11.4472 57.11.4472	47 kOhm 4-7 kOhm 4-7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
ru	DER (OO	) 87/05/20 GP	AUDIO EL	ECTRONICS BOARD 1.727.440.00	PAGE 14	STU	DFR (O	0) 87/05/20 GP	AUDIO EL	ECTRONICS BOARD 1.727.460.00	D PAGE
)•	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	IND.	P05+N0+	PART NG.		SPECIFICATIONS / EQUIVALENT	MAN
	R * * * 254 R * * * 255 R * * * 256	57.11.4331 57.11.4102 57.11.4273	330 Ohm 1 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		Note I	. Variabl	e Phantom Suppl			
	R • • • 257 R • • • 258 R • • • 259	57-11-4102 57-11-4471 57-11-4103 57-11-4221	1 kOhm 470 Ohm 10 kOhm 220 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			48	R 3 / R 4 I	7990250   6	8 kOhm 0.1 % 0.25 W MF	
	R • • • 260 R • • • 261 R • • • 262 R • • • 263 R • • • 264	57.11.4122 57.11.4471 57.11.4223 57.11.4222	1 • 2 kOhm 470 Ohm 22 kOhm 2 • 2 kUhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		Cer =	12   Ceramic	R3/R41 5	7990199   6 olytic PET	80 Ohm 0.1 % 0.25 W MF	
	R • • • 265 R • • • 266 R • • • 267 R • • • 268	57.11.4473 57.11.4103 57.11.4682 57.11.4682	47 kOhm 10 kOhm 6.8 kOhm 6.8 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF		MANUFA	CTURER: AD	I = Analog Devi = National Se g = Signetics	es Inc.	= Silicon Mot = Motorola Ra = Raytheon St = Studer	
	R • • • 269 R • • • 270 R • • • 271 R • • • 272	57.11.4103 57.11.4472 57.11.4122 57.11.4223	10 k0hm 4•7 k0hm 1•2 k0hm 22 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R273 R274 R275 R276	57.11.4223 57.11.4473 57.11.4223 57.11.4103	22 kOhm 47 kOhm 22 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R277 R278 R279 R280	57.11.4339 57.11.4103 57.11.4103 57.11.4339	3.3 Ohm 10 kOhm 10 kOhm 3.3 Ohm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF							
	R • • • 281 R • • • 282 R • • • 283 K • • • 284	57.11.4222 57.11.4222 57.11.4339 57.11.4103	2.2 k0hm 2.2 k0hm 3.3 0hm 10 k0hm	2%, 0.25H, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 285 R • • • 286 R • • • 287 R • • • 288	57.11.4103 57.11.4339 57.11.4472 57.11.4103	10 k0hm 3•3 Ohm 4•7 k0hm 10 k0hm	2%, 0,25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
				2%, 0.25W. MF							

AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42 AUDIO ELECTRONICS (VU) 1.727.420.81 GRP41/42

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)



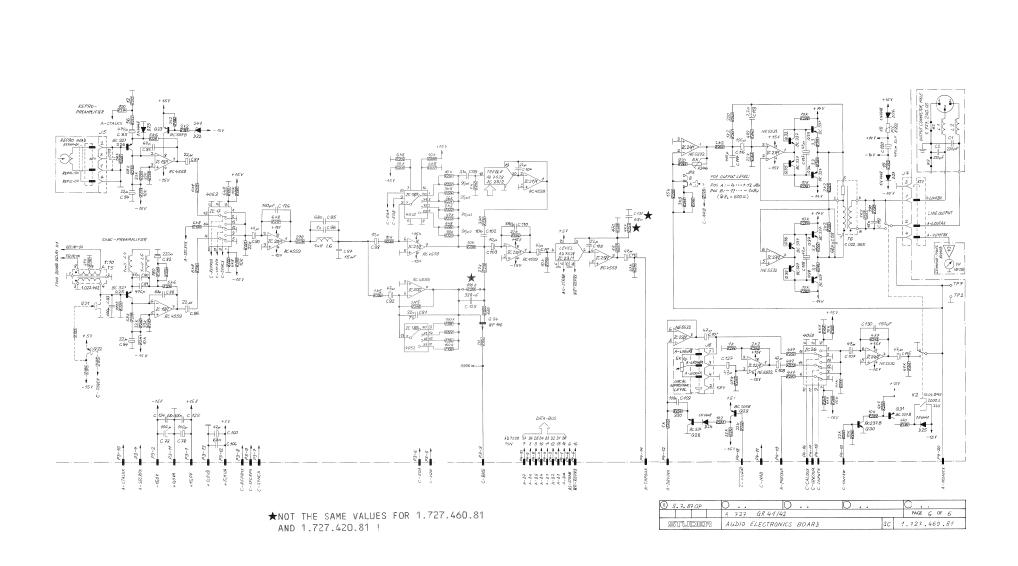




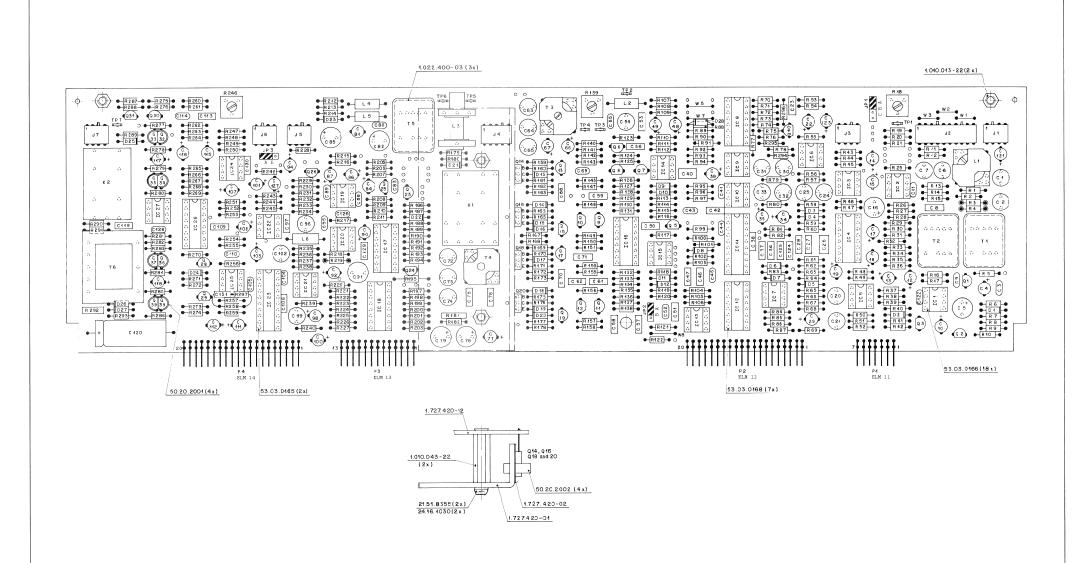
AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42 AUDIO ELECTRONICS (VU) 1.727.420.81 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33) - MIC INPUT CONNECTOR 1.727.242.00 (SEE PAGE 7/34)











### AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42

0. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF
C2 9-29-1102 1 ner 13 50V PP  C2 9-29-25-1102 1 ner 13 50V PP  C2 9-29-25-1102 1 ner 15 50V Corr  S2 9-29-25-1102 1 ner 15 50V Corr  C2 9-29-25-1102 1 ner 15 50V Corr  C2 9-29-25-27-11 2 10 uer -C.C. 50V PP  C2 9-29-25-27-11 1 ner 15 50V PP  C2 9-29-25-20-210 1 ner 15 50V PP  C2 9-29-25-210 1 ner 25-25 50V PP  C2 9-29-25-2	L. 112 S 1-21-2570 4 T UF -708 10V EL L. 113 S 1-61-2572 2 22 P1 10X 50V FET L. 114 S 1-70-2572 2 22 P1 10X 50V FET L. 115 S 1-70-7571 1 T OF F 10X 50V GeT L. 116 S 1-72-2571 1 T OF F 10X 50V GeT L. 117 S 1-72-2571 1 T OF F 10X 50V IL L. 117 S 1-72-2571 1 T OF F 10X 50V IL L. 117 S 1-72-2571 1 T OF F 10X 50V IL L. 118 S 1-72-2571 1 T OF F 10X 50V IL L. 119 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IL L. 112 S 1-72-2571 1 T OF F 10X 50V IC L. 112 S 1-72-2571 1 T OF F 10X 50V IC L. 112 S 1-72-2571 1 T OF F 10X 50V IC L. 112 S 1-72-2571 1 T OF F 10X 50V IC L. 113 S 10X-2081 3 00 F 10X 50V ICF L. 113 S 10X-2081 3 00 F 10X 50V ICF L. 113 S 10X-2081 3 00 F 10X 50V ICF L. 113 S 10X-2081 3 00 F 10X 50V ICF	##	1 - 0.1
C13 99-22-12-20 12 uF -2C\$ 259 EL  C13 99-22-12-20 12 uF -2C\$ 259 EL  C15 99-22-12-21 22 0 uF -2C\$ 6-19 EL  C16 99-22-12-21 22 0 uF -2C\$ 6-19 EL  C16 99-22-12-21 22 0 uF -2C\$ 6-19 EL  C16 99-22-12-21 22 0 uF -2C\$ 159 EL  C16 99-22-12-21 22 0 uF -2C\$ 159 EL  C17 99-22-12-21 22 0 uF -2C\$ 159 EL  C18 99-22-12-21 22 0 uF -2C\$ 159 EF  C18 99-22-12-21 22 0 uF -2C\$ 159 EF  C29 99-20-102 0 uF -2C\$ 159 EF  C29 99-20-102 1 uF -2C\$ 159 EF  C29 99-22-12-20 uF -2C\$ 159 EF  C20 159-20-20-20 uF  C20 159-20-20 uF  C20 159-20-20 uF  C20 159-20-20 uF  C20 159-20 uF  C20 159-20	1  1	C	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
- POS-NO- FART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND- POSINO- PARTINO, VALUE SPECIFICATIONS / EQUIVALENT HARUF.	INO. PSS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MAMP.	INO. FOS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE
C30 \$70,00,008	017 0.00-0-0125 1044-08 50V 11 017 0.00-0-0125 1044-08 50V 11 020 0.00-0125 1044-08 50V 11 020 0.00-0125 1044-08 50V 11 021 0.00-0125 1044-08 50V 11 022 0.00-0125 1044-08 50V 11 022 0.00-0125 1044-08 50V 11 023 0.00-0125 1044-08 50V 11 024 0.00-0125 1044-08 50V 11 040 0.00-0125 1044-08 5	Columb	1
POS-NO. FART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF-	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. PCS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND- POS.NO. PART NO. WALUE SPECIFICATIONS / EQUIVALENT MAM.
C75 9-0.0-0224 220 aF 123 50V PETP  C76 9-0.0-0224 220 aF 123 50V PETP  C77 9-0.0-0224 220 aF 123 50V ETP  C77 9-0.0-0224 220 aF 123 50V ETP  C97 9-0.0-0224 220 aF 123 50V ETP  C98 9-0.0-0224 220 aF 123 50V ETP  C99 9-0.2-2-221 00 aF 123 50V ETP  C20 9-0.2-222 22 aF 123 50V ETP  C20 9-0.2-222 23 aF 123 50V ETP  C20 9-0.2-224 37 aF 223 50V ETP  C20 9-0.2-244 37 aF 224 50V ETP  C20 9-0.2-244 37 aF 224 50V ETP  C20 9-0.2-244 37 aF 224 50V		##	1.13   1.14   1.15



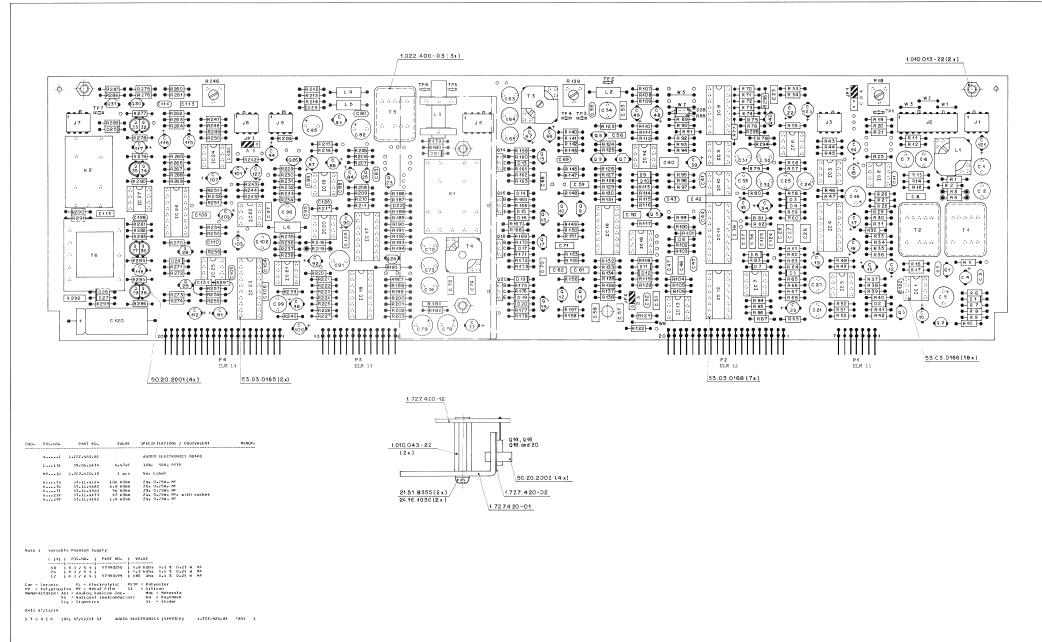
# AUDIO ELECTRONICS (VU) 1.727.460.81 GRP41/42

	P05.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	R178 R179	57.11.4682 57.11.4473	6.8 kOhm 47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			R289 R290	57.11.4471 57.11.4391	470 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF	
	R180 R181 R182	57.11.4100 57.99.0209 57.11.4569	10 Ohm 5.6 Ohm 5.6 Ohm	2%, 0.25W, MF PTC 2%, 0.25W, MF			R • • • 291 R • • • 292 R • • • 293	57.11.4152 57.92.1151 57.11.4180	1.5 kOhm 18 Ohm 16 Ohm	2%, 0.25W, MF 150mA, PTC 2%, 0.25W, MF	
	R • • • 183 R • • • 184 K • • • 185			not used not used not used			R • • • 294 R • • • 295 R • • • 296	57.11.4470 57.11.4223 57.11.4105	47 Ohm 22 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	
	R186 R187 R188	57.11.4222 57.11.4222 57.11.4103	2.2 kOhm 2.2 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			R297	57.11.4472 1.022.400.00	4.7 kOhm	2%, 0.25W, MF Mic Input Trafo	St
	R189 R190 R191	57.11.4682 57.11.4682 57.11.4223	6.8 kOhm 6.8 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			I • • • • • 2 I • • • • • 3 I • • • • • 4	1.022.451.00 1.022.271.00 1.022.272.00	1:0.62	Line Input Trafo Erase Trafo Bias Trafo	S: S:
	R192 R193	57.11.4682 57.11.4103 57.11.4105	6.8 kOhm 10 kOhm 1 MOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			T • • • • • 6	1.022.402.00	1:10	Sync Trafo Line Output Trafo	S1
	R194 R195 R196	57.11.4681	680 Ohm	2%, 0.25W. MF not used			TP • • • • 2 TP • • • • 3	54.02.0320 54.02.0320 54.02.0320		Plug 2.8≎0.8 Plug 2.8≎0.8 Plug 2.8≎0.8	AI AI
	R197 R198 R199 R200	57-11-3164 57-11-3164 57-11-4103	160 kOhm 160 kOhm 10 kOhm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF			TP5 TP6	54.02.0320 54.02.0320 54.02.0320		Plug 2.8¢0.8 Plug 2.8¢0.8 Plug 2.8¢0.8	Ai Ai
	R201 R202	57.11.4682 57.11.4682 57.11.4682	6.8 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			TP7	54.02.0320 64.01.0106		Plug 2.8≎0.8 Wire Bridge	Ai
	R 203 R 204 R 205	57.11.4181	180 Ohm 5.6 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			W 2 W 3 W 4	64.01.0106 04.01.0106		Wire Bridge Wire Bridge not used	
	R • • • 206 R • • • 207 R • • • 208	57.11.4562 57.11.4104 57.11.4683	100 kOhm 68 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			W • • • • • 5	64.01.0106		Wire Bridge not used	
	R209 R210 R211	57.11.4333 57.11.4333 57.11.4103	33 kOhm 33 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			W 8	64.01.0106 64.01.0106		Wire Bridge Wire Bridge	
	R • • • 212 R • • • 213 R • • • 214	57.11.4120 57.11.4560 57.11.4101	12 Ohm 56 Ohm 100 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC···l XIC···2 XIC···3	53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket	
T U	D E R (00	) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD 1.727.460.8	1 PAGE 13	STU	DER (O	0) 87/07/09 GP	AUDIO EL	ECTRUNICS BOARD 1.727.460.81	PAGE
				SPECIFICATIONS / EQUIVALENT	MANUE -	Lun	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / FOULVALENT	MANI
	P05+N0+ R+++215	PART NO.	VALUE 	2%, 0.25%, MF	MANUF		XIC4			IC Socket	
	R216 R217 R218	57.11.4682 57.11.4682 57.11.5155	6.8 kOhm 6.8 kOhm 1.5 MOhm	2%+ 0-25W+ MF 2%+ 0-25W+ MF 5%+ 0+25W+ MF			XIC 5 XIC 6 XIC 7	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 6-Pole	IC Socket IC Socket IC Socket	
	R***219 R***220	57.11.4104 57.11.4103	100 kOhm 10 kOhm	2%, 0.25W. MF, with socket 2%, 0.25W, MF not used			XIC 9 XIC 9 XIC 10	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole	IC Socket IC Socket IL Socket	
	R • • • 221 R • • • 222 R • • • 223	57.11.4822 57.11.4473	8.2 k0hm 47 k0hm	2%, 0.25W, MF 2%, 0.25W, MF			XIC 11 XIC 12 XIC 13	53.03.0165 53.03.0168 53.03.0166	20-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R • • • 224 R • • • 225 R • • • 226	57.11.4682 57.11.4393 57.11.4392	6.8 kOhm 39 kOhm 3.9 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF			XIC 14 XIC 15	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R • • • 227 R • • • 228 R • • • 229	57.11.4563 57.11.4563 57.11.4562	56 kOhm 56 kOhm 5.6 kOhm	2%, 0.25W, MF 2%, 0.25W, MF			XIC16 XIC17 XIC18	53.03.0168 53.03.0168 53.03.0168	16-Pole 16-Pole 16-Pole	IC Socket IC Socket	
	R • • • 230 R • • • 231 R • • • 232	57.11.4683 57.11.4333 57.11.4333	68 kOhm 33 kOhm 33 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC19 XIC20 XIC21	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R • • • 233 R • • • 234 R • • • 235	57.11.4103 57.11.4271 57.11.4273	10 k0hm 270 Ohm 27 k0hm	2%, 0.25W, MF 2 % 0.25W, MF 2%, 0.25W, MF			XIC 22 XIC 23 XIC 24	53.03.0166 53.03.0165 53.03.0166	8-Pole 20-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R • • • 236 R • • • 237 R • • • 238	57.11.4152 57.11.4331 57.11.4103	1.5 kOhm 330 Ohm 10 kOhm	2%, 0.25M+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF			XIC25 XIC25 XIC27	53.03.0166 53.03.0168 53.03.0166	8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R • • • 239 R • • • 240 R • • • 241	57.11.4103 57.11.4102	10 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF not used							
	R • • • 242 R • • • 243 R • • • 244	57.11.4472 57.11.4473 57.11.4102	4.7 kOhm 47 kOhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 245 R • • • 246 R • • • 247	57.11.4222 58.01.8502 57.11.4821	2.2 kOhm 5 kOhm 820 Ohm	2%, 0.25%, MF 10%, 0.5 %, PMG 2%, 0.25%, MF							
	R • • • 248 R • • • 249 R • • • 250	57.11.4392 57.11.4153	3.9 kOhm 15 kOhm	2%, 0.25%, MF not used 2%, 0.25%, MF							
T U	R251	57.11.4473 0) 87/07/09 GP	47 kOhm	2%+ 0+25W+ MF	I PAGE 14	STU	DER (C	10) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD 1.727.460.81	PAGE
	,,,,	, ,									
	P05.N0.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAM
	R252 R253 R254	57.11.4472 57.11.4472 57.11.4331	4.7 kOhm 4.7 kOhm 330 Ohm	2%, 0.25W, MF 2%. 0.25W. MF 2%, 0.25W. MF		Note		le Phantom Supp		WALUE	
	R • • • 255 R • • • 256 R • • • 257	57.11.4102 57.11.4273 57.11.4102	1 k0hm 27 k0hm 1 k0hm	2%, 0.25w, MF 2%, 0.25w, MF 2%, 0.25w, MF			48	R 3 / R 4	7990250	6.8 kOhm 0.1 % 0.25 W MF	
		57-11-4471	470 Ohm	2%, 0.25W, MF 2%, 0.25W, MF			12		57990199	4-3 kOhm 0-1 % 0-25 W MF 680 Ohm 0-1 % 0-25 W MF	
	R • • • 258 R • • • 259 R • • • 260	57•11•4103 57•11•4221	10 k9hm 220 9hm	2%, 0.25W, MF			Ceramic	tL = Elect	rolytic PE	TP = Polyester	
	8 259	57-11-4103	220 Ohm 1.2 kOhm 470 Ohm 22 kOhm	2%; 0.25W; MF 2%; 0.25W; MF 2%; 0.25W; MF		PP -	Polypropy ACTURER: A	len MF = Mctal DI = Analog Dev	rilm SI ices Inc.	Mot = Motorola	
	R • • • 259 R • • • 260 R • • • 261 R • • • 262	57.11.4103 57.11.4221 57.11.4122 57.11.4471 57.11.4223 57.11.4223 57.11.4222	220 Ohm 1.2 kOhm 470 Ohm 22 kOhm 2.2 kOhm 47 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF		PP -	Polypropy ACTURER: A: N.	len MF = Motal	rilm SI ices Inc.	Mot = Motorola	
	R259 R260 R261 R262 R264 R265 R266 R266 R267	57-11-4103 57-11-4221 57-11-4225 57-11-4471 57-11-4223 57-11-4473 57-11-4682 57-11-4682	220 Ohm 1.2 kOhm 470 Ohm 22 kOhm 2.2 kOhm 47 kOhm 10 kOhm 6.8 kOhm	2% 0.25% MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	
	R 259 R 260 R 261 R 262 R 263 R 264 R 265 R 266 R 266 R 267 R 268 R 269 R 270 R 271	97-11-9103 97-11-4221 97-11-4222 97-11-4223 97-11-4223 97-11-4473 97-11-4682 97-11-4682 97-11-4682 97-11-4682 97-11-4103 97-11-4472	220 Ohm 1-2 kOhm 20 kOhm 22 kOhm 2-2 kOhm 10 kOhm 6-8 kOhm 6-8 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm	2%, 0.25%, MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	
	8 259 R 260 R 261 R 262 R 263 R 264 R 265 R 266 R 267 R 269 R 269 R 270 R 271 R 272 R 273 R 274	57.11.4103 57.11.4122 57.11.4122 57.11.4123 57.11.4223 57.11.4223 57.11.4682 57.11.4682 57.11.4682 57.11.4123 57.11.4123 57.11.4123 57.11.4123	2-20	2% 0.25% MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	
	8 259 R 260 R 261 R 263 R 263 R 265 R 266 R 267 R 268 R 267 R 270 R 271 R 272 R 273 R 274 R 275 R 275 R 275 R 275	57-11-4103 57-11-4221 57-11-4221 57-11-4223 57-11-4223 57-11-4473 57-11-4473 57-11-4682 57-11-4682 57-11-4123 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-423	220 Ohm 1-2 kOhm 470 Uhm 22 kOhm 47 kOhm 10 kOhm 6-8 kOhm 10 kOhm 1-2 kOhm 1-2 kOhm 1-2 kOhm 22 kOhm 24 kOhm 25 kOhm 26 kOhm 36 kOhm 37 kOhm 38 kOhm 38 kOhm 39 kOhm 30 kOhm 3	2%, 0.25%, MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	
	R 259 R 260 R 261 R 262 R 263 R 263 R 265 R 266 R 267 R 269 R 270 R 271 R 272 R 273 R 274 K 275 R 275 R 276 R 276 R 276 R 277 R 277 R 278 R 278	57-11-4023 57-11-4221 57-11-4221 57-11-4122 57-11-4471 57-11-4222 57-11-4473 57-11-4473 57-11-4472 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223 57-11-4223	220 Ohm 1-2 kOhm 470 Uhm 22 kOhm 22 kOhm 47 kOhm 10 kOhm 6-8 kOhm 10 kOhm 1-2 kOhm 22 kOhm 22 kOhm 22 kOhm 24 kOhm 25 kOhm 26 kOhm 26 kOhm 27 kOhm 28 kOhm 28 kOhm 29 kOhm 30 kOhm	2%, 0.25%, MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	
	R	57-11-4103 57-11-4221 57-11-4221 57-11-4222 57-11-4223 57-11-4223 57-11-4403 57-11-4603 57-11-4603 57-11-403 57-11-4223 57-11-4223 57-11-4239 57-11-4103 57-11-4103	220 Ohm 470 Uhm 470 Uhm 22 kOhm 22 kOhm 47 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm 11 kOhm 12 kOhm 12 kOhm 12 kOhm 12 kOhm 12 kOhm 13 kOhm 14 kOhm 15 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 16 kOhm 17 kOhm 18 kOhm 18 kOhm 19 kOhm 19 kOhm 10 kOh	2% 0.25% MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	
	8	57-11-402 57-11-422 57-11-422 57-11-422 57-11-422 57-11-422 57-11-447 57-11-4403 57-11-4403 57-11-4403 57-11-4403 57-11-4403 57-11-422 57-11-422 57-11-422 57-11-422 57-11-423 57-11-422 57-11-4103 57-11-422 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103 57-11-4103	220 Ohm 470 Uhm 470 Uhm 470 Uhm 22 Kohm 22 Kohm 47 Kohn 10 Kohn 10 Kohn 10 Kohn 11 Kohn 12 Kohn 12 Kohn 12 Kohn 12 Kohn 13 Kohn 14 Kohn 15 Kohn 16 Kohn 17 Kohn 18 Kohn 20 Kohn 20 Kohn	2%, 0.25%, MF		PP -	Polypropy ACTURER: A: N.	len MF = Mctal DI = Analog Dev S = National S	rilm SI ices Inc.	Mot = Motorola s Ra = Raytheon	



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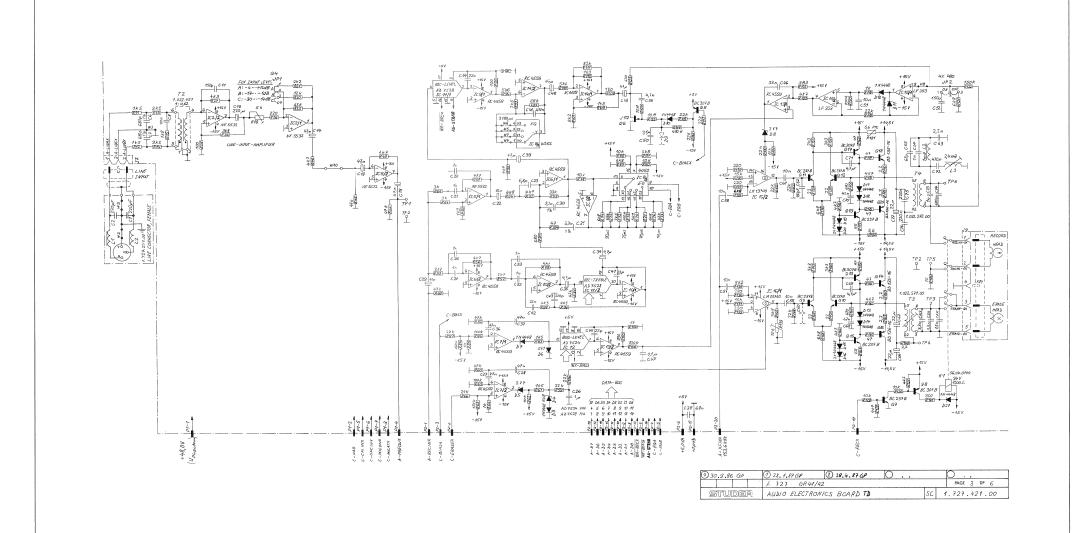
AUDIO ELECTRONICS (VU) 1.727.420.81 GRP41/42



AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)



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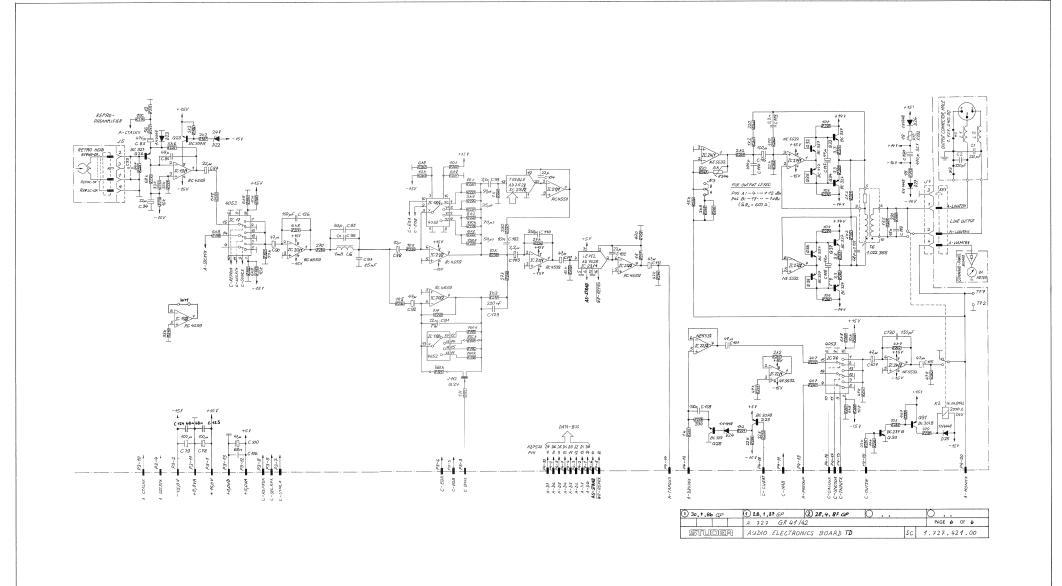


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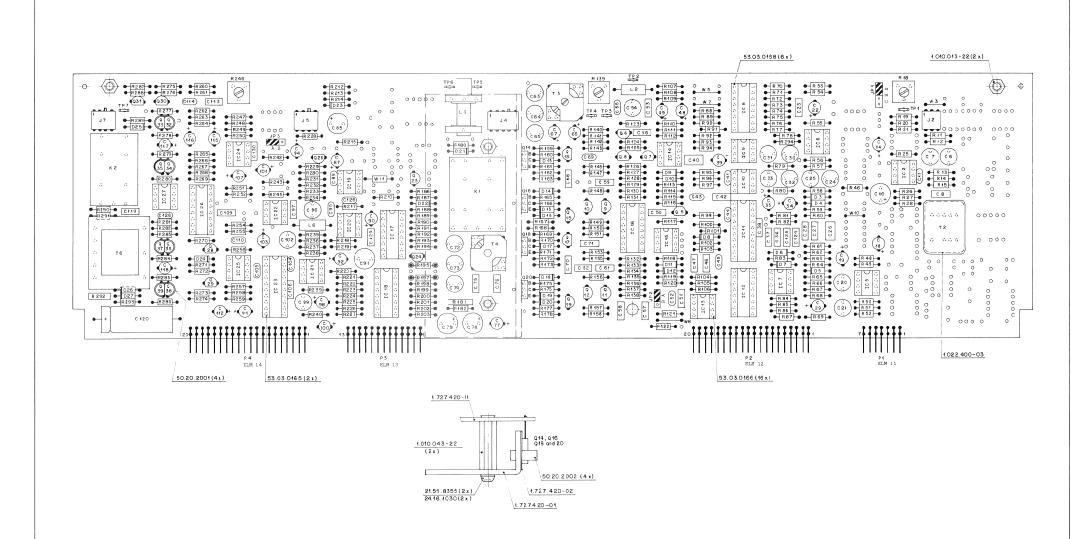
AUDIO ELECTRONICS (0 VU) 1.727.421.00 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)







AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42





### AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42

AUDIO EFECTRONIC	5 (U VU) 1.727.421.UU GRP		Associomento		
IND, POS-NO, PART NO-	VALUE SPECIFICATIONS / EQUIVALENT MANUF.	THO. FOS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MA NUF.	110. PRS-10. PART NO. VALUE SPECIFICATIONS / COMEVALENT MANUE.	ING. FOSING. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C34 59.22.8479 C35 59.22.8479 C36 59.06.0473 C37 59.06.0473 C38 59.06.0683	048 pf 11 500 PP  100 pf 11 500 PP  110 pf 10 pf	0	Sig Sig Ra- Ante Re Re Ante Ante Ante Ante Ante Ante Ante Ant	011 50-03-05-15 KS 107B R557FB K5500 MPh 022 50-05-05-05 KS 137B matched with 031 MPh 025 50-05-05-16 KS 137B matched with 031 MPh 035 50-05-16-05 KS 127F matched with 034 MPh 036 50-05-06-05 KS 127F matched with 034 MPh 037 50-05-16-05 KS 127F matched with 034 MPh 038 50-05-16-05 KS 127F matched with 034 MPh 038 50-05-16-05 KS 127F matched with 034 MPh 038 50-05-16-05 KS 127F matched with 034 MPh 039 57-16-16-17 KS 127F matched with 034 MPh 030 57-16-16-17	**************************************
INO. POS.NC. PERT NO.	VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MA NUF .	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS-NO. PARE NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C	07 UP -20% 10V EL 100 mf 100 m	Heat	MS M	8	5 - 117
IND+ POS+NG+ PART NO+	VALUE SPECIFICATIONS / EQUIVALENT HANUF,	IND. POSING. PARTING. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	INO. PSS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. FUS-NO- PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C23 C24 C25 C26 C26 C26 C26 C27	22 uf 9 -201 25W EL 1 nf 2-51 50W PF 1 10 uf 2-50 50W Uf 2		St. St. St. St. St. Mot. Mot.		1225 31.1.1.4313 30 0.00m 23. 0.25w. FF 1226 51.1.1.4312 50 0.00m 23. 0.25w. FF 1226 51.1.1.432 50 0.00m 24. 0.25w. WF 1226 51.1.1.432 50 0.00m 24. 0.25w. WF 1226 51.1.1.432 50 0.00m 24. 0.25w. WF 1227 51.1.1.433 33 0.00m 24. 0.25w. WF 1221 31.1.1.4333 33 0.00m 24. 0.25w. WF 1221 31.1.1.4333 33 0.00m 24. 0.25w. WF 1221 31.1.1.4333 33 0.00m 24. 0.25w. WF 1221 31.1.1.4331 33 0.00m 24. 0.25w. WF 1221 31.1.1.4331 33 0.00m 24. 0.25w. WF 1223 31.1.1.4331 31 0.00m 24. 0.25w. WF 1223 31.1.1.4331 31 0.00m 24. 0.25w. WF 1223 31.1.1.4331 30 0.00m 24. 0.25w. WF 1224 31.1.1.4332 31 0.00m 24. 0.25w. WF 1225 31.1.1.4332 31 0.00m 24. 0.25w. WF 1226 31.1.1.4332 31 0.00m 24. 0.25w. WF 1226 31.1.1.4332 32 0.00m 24. 0.25w. WF 1226 31.1.1.4331 30 0.00m 24. 0.25w. WF 1226 31.1.1.4331 32 0.00m 24. 0.25w. WF 1226 31.1.1.4331 32 0.00m 24. 0.25w. WF 1226 31.1.1.4331 32 0.00m 24. 0.25w. WF 1226 31.1.4331 32 0.00m 24. 0.25w. WF 1226 31.1.4331 32 0.00m 24. 0.25w. WF 1226 31.1.4331 33 0.00m 24. 0.25w. WF 1226 31.1.4331 33 0.00m 24. 0.25w. WF 1226 31.1.4331 33 0.00m 24. 0.25w. WF 1226 31.1.4331 32 0.00m 24. 0.25w. WF 1226 31.1.4331 30 0.00m 24. 0.25w. WF



# AUDIO ELECTRONICS (O VU) 1.727.421.00 GRP41/42

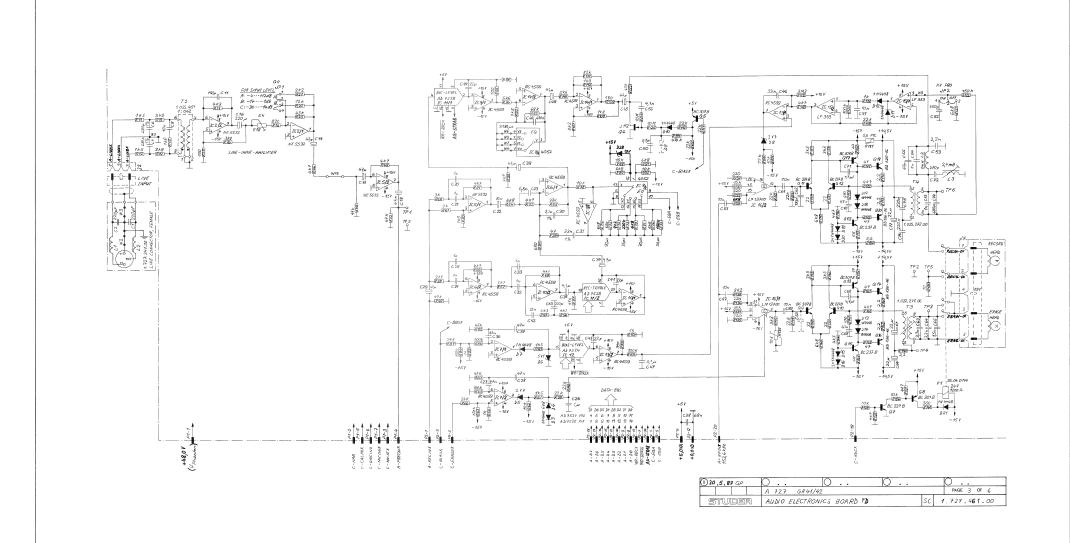
	R264	57.11.4222	2.2 kOhm	2%, 0.25W, MF		
	R 265	57.11.4473	47 k0hm	2%+ 0.25W+ MF		
	R • • • 266	57-11-4103	10 kOhm	2%, 0.25W, MF		
	R • • • 267	57.11.4682	6.8 kOhm	2%, 0.25W, MF		
	K • • • 268	57.11.4682	6.8 kUhm	2%, U.25W, MF		
	R • • • 269	57-11-4103	10 kOhm	2%, 0.25W, MF		
	R • • • 270	57-11-4472	4.7 kOhm	2%, 0.25W, MF		
	R • • • 271	57.11.4122	1.2 kOhm	2%, 0.25W, MF		
	R • • • 272	57.11.4223	22 kDhm	2%, 0.25W, MF		
	R • • • 273 R • • • 274	57.11.4223	22 k0hm 47 k0hm	2%, 0.25W, MF 2%, 0.25W, MF		
	R 275	57•11•4473 57•11•4223	22 kOhm	2% 0.25W MF		
	R276	57.11.4223	10 kOhm	2% 0.25W MF		
	R277	57.11.4103	3.3 Ohm	2% 0.25W MF		
	8 278	57.11.4103	10 kOhm	2% 0.25W MF		
	R279	57-11-4103	10 kOhm	2% 0.25W MF		
	R • • • 280	57.11.4339	3.3 Ohm	2% 0.25W MF		
	R • • • 281	57.11.4222	2.2 kOhm	2%. 0.25W. MF		
	R282	57-11-4222	2+2 kOhm	2%. 0.25W. MF		
	R • • • 283	57.11.4339	3.3 Ohm	2%, 0.25W, MF		
	R284	57.11.4103	10 kOhm	2%, 0.25W, MF		
	R285	57.11.4103	10 k0hm	2%, 0.25H, 4F		
	R 286	57.11.4339	3.3 Ohm	2%, 0.25W, MF		
	R 287	57.11.4472	4.7 k0hm	2%, 0.25W, MF		
	R • • • 288	57-11-4103	10 KONM	2%, 0.25W, MF		
	R • • • 289	57-11-4471	470 Ohm	2%, 0.25W, MF		
	R290	57.11.4391	390 Ohm	2%, 0.25W, MF		
	R291	57.11.4152	1.5 kOhm	2%, 0.25W, MF		
	R292	57.92.1151	18 Ohm	150mA, PTC		
	R • • • 293 R • • • 294	57.11.4180 57.11.4470	18 Ohm 47 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	T • • • • 2	1.022.451.00	1:0.62	Line Input Trafo		St
	T • • • • 3	1.022.271.00		Erase Trafo		St
	T 4	1.022.272.00		Bias Trafo		St
	T6	1.022.355.00		Line Output Trafo		St
s T U	DER (	02) 87/04/28 GP	AUDIO E	LECTRONICS BOARD TD	1.727.421.00	PAGE 1

INO.	P05.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUI	(VALENT	MANUF
	TP1	54.02.0320		Plug 2.8*0.8		AMP
	TP 2	54.02.0320		Plug 2.8*0.8		AMP
	TP3	54.02.0320		Plug 2.8*0.8		AMP
	TP 4	54.02.0320		Plug 2.8 0.8		AMP
	TP 5	54.02.0320		Plug 2.8#0.8		AMP
	TP6	54-02-0320		Plug 2.8 * 0.8		AMP
	TP • • • • 7	54.02.0320		Plug 2.8*0.8		AMP
	w3	64.01.0106		Wire Bridge		
	W 4			not used		
	W5	64.01.0106		Wire Bridge		
	W 6			not used		
	W 7	64.01.0106		Wire Bridge		
	W8	64.01.0106		Wire Bridge		
	W10	64.01.0106		wire bridge		
	W11	57-11-4000		Wire Bridge		
	XIC 2	53.03.0166	6-Pole	IC Socket		
	XIC5	53.03.0166	8-Pole	IC Socket		
	XIC 6	53.03.0166	8-Pole	IC Socket		
	XIC 7	53.03.0166	8-Pole	IC Socket		
	XIC8	53.03.0168	16-Pole	IC Socket		
	XIC 9	53.03.0166	8-Pole	IC Socket		
	XIC10	53.03.0166	8-Pole	IC Socket		
	XIC 11	53.03.0165	20-Pole	IC Socket		
	XIC12	53.03.0168	16-Pole	IC Socket		
	XIC13	53.03.0166	8-Pole	IC Socket		
	XIC • • 14	53.03.0166	8-Pole	IC Socket		
	XIC15	53.03.0166	8-Pole	IC Socket IC Socket		
	XIC16	53.03.0168	16-Pole	IC Socket		
	XIC 17	53.03.0168	16-Pole	IC Socket		
	XIC++10	53.03.0168	16-Pole	IC Socket		
	XIC19	53.03.0166	8-Pole			
	XIC 20 XIC 21	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket		
	XIC 22	53.03.0166	8-Pole	IC Socket		
	XIC • • 23	53.03.0165	20-Pole	IC Socket		
STU	DER (0)	2) 87/04/28 GP	AUDIO EL	ECTRONICS BOARD TD	1.727.421.00	PAGE 14

IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.
XIC24	53-03-0166	8-Pole	IC Socket	
XIC 2: XIC 2: XIC 2:	53.03.0166 53.03.0168	8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket	

AUDIO ELECTRONICS (O VU) 1.727.461.00 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

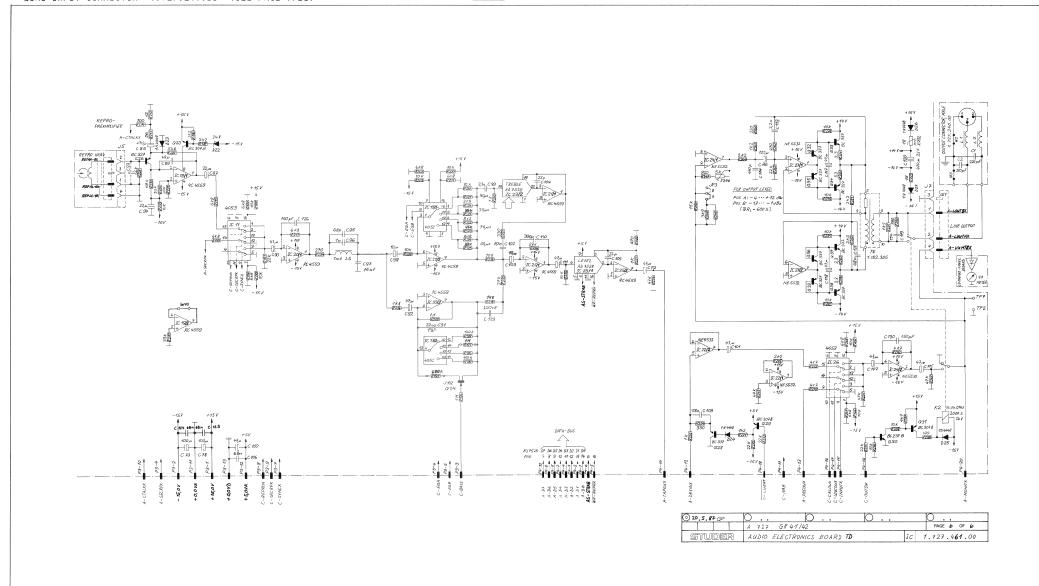




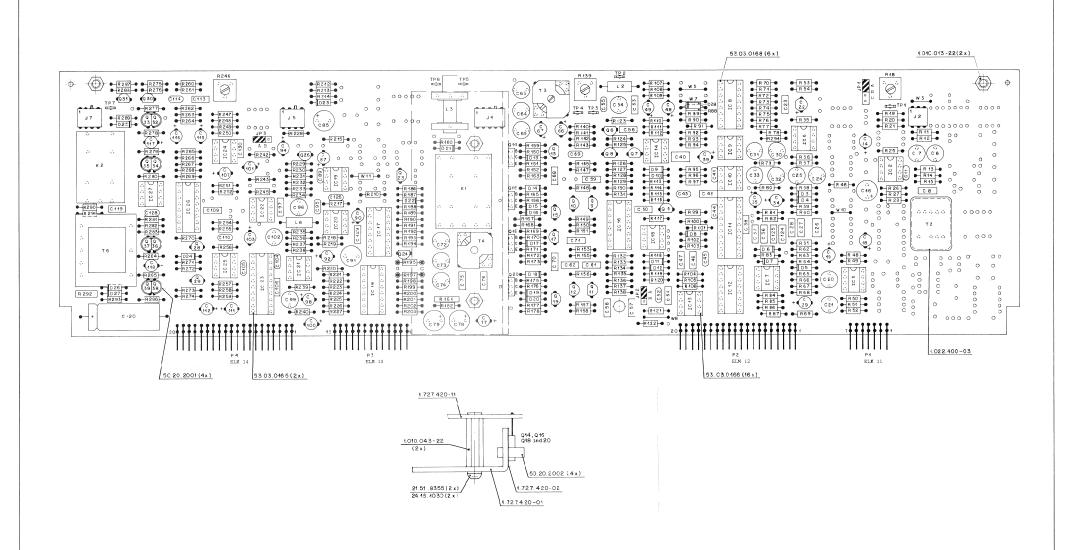
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32) - LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

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### AUDIO ELECTRONICS (0 VU) 1.727.461.00 GRP41/42

RODIO ELECTRONICS (O VO) 1.721.401.00 GMT4				
IND. PDS-NG. PART NO. YALUE SPECIFICATIONS / EQUIVALENT MANUF.	IVD- POS-NO. PART NO. VALUE SPECIFICATIONS / EQJIVALENT	MANUF.	ING. POS.NG. PIRT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. FOS-NO. PARE NO. VALUE SPECIFICATIONS / EQUIVALENT MANNE-
C 6 39-05-1481 688 pF 11 307 PF 1   C 7 39-05-1481 688 pF 11 307 PF 1   C 18 39-05-1481 688 pF 1 11 307 PF 1   C 18 39-05-1481 688 pF 1 12 307 CF 1   C 18 39-05-1481	December   December	51g 51g 61g 82 84 84 84 84 84 85 84 85 84 85 84 84 85 86 86 86 86 86 86 86 86 86 86 86 86 86	Gu. 12 30-23-0916 BC337 matched with 033 NPN Gu. 13 50-23-0916 BC337 matched with 034 NPN Gu. 13 50-23-0916 BC327 matched with 034 NPN Gu. 13 50-23-0926 BC227 matched with 034 NPN Gu. 13 51-14-1452 L1-5 NPN Gu. 13 51-14-1472 L1-5 NPN Gu. 14 SPR Gu. 13 51-14-1472 L1-5 NPN Gu. 14 SPR Gu. 14 SPR Gu. 15 51-14-1472 L1-5 NPN Gu. 15 51-14-1472 L1-5 N	1136 371.1.0214 220 Obe 23.0.25% AE 1137 371.1.0214 220 Obe 23.0.25% AE 1137 371.1.0214 020 Obe 25.0.25% AE 1139 371.1.0214 10.00 Obe 25.0.25% AE 1139 380.1.0313 10.00 Obe 25.0.25% AE 1139 380.1.0313 10.00 Obe 25.0.25% AE 1130 371.1.0312 3.3.10 Obe 25.0.25% AE 1130 371.1.0312 3.3.10 Obe 25.0.25% AE 1130 371.1.0313 3.3.10 Obe 25.0.25% AE 1131 371.1.0313 3.3.10 Obe 25.0.25% AE
IND. POS.NO. PART NO. PALVE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MA NUF .	IND. PES NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
C9 39.22.3.170 47 ulf -201 10V EL C9 19.05.0010 110 nf 101 59V PETP C1 19.05.0010 110 nf 101 59V PETP C1 19.05.0010 110 nf 101 59V PETP C2 19.05.0017 110 nf 101 59V	10	NS NOT	R	### ### ### ### #### #### #### #### ####
IND. POS.NG. PART NO. VALUE SPECIFICATIONS / SQUIVALENT MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EDJIVALENT	MANUF.	IND. PES.NO. PIRT NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIPALENT MANUF.
C30  39-22-3220  C30  39-22-3220  C30  19-22-3220  C30  C30  19-22-3220  C30  19-22-3220  C30  19-22-3220  C30  19-22-3220  C30  C	PR.   0   1-77.40.02   1   pcs	\$6 \$1 \$1 \$1 \$1 \$1 #60 #60 #60	R	1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -



# AUDIO ELECTRONICS (O VU) 1.727.461.00 GRP41/42

	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
R 268	57.11.4682	6.8 kOhm	2%, 0.25W, MF	
R • • • 269	57-11-4103	10 kOhm	2%, 0.25W, MF	
R270	57.11.4472	4.7 kOhm	2%, 0.25W, MF	
R271	57.11.4122	1.2 kOhm	2%, 0.25W, MF	
R • • • 272	57.11.4223	22 k0hm	2%, 0.25W, MF	
R273	57.11.4223	22 kOhm	2%, 0.25W, MF	
R • • • 274	57.11.4473	47 kOhm	2%, 0.25W, MF	
R 275	57.11.4223	22 kOhm	2%. 0.25W. MF	
R276	57.11.4103	10 kOhm	2%, 0.25W, MF	
R • • • 277	57-11-4339	3 • 3 Ohm	2%+ 0+25W+ MF	
R278	57-11-4103	10 kOhm	2%, 0.25W. MF 2%, 0.25W. MF	
R279 R280	57•11•4103 57•11•4339	10 kOhm 3•3 Ohm	2%, U+25W, MF 2%, U+25W, MF	
R 281	57.11.4222	2.2 kOhm	2%, 0.25W, MF	
R 282	57.11.4222	2.2 kOhm	2% 0.25W MF	
R 283	57.11.4339	3.3 Ohm	2% 0.25W MF	
R 284	57-11-4103	10 kOhm	2% 0.25W MF	
R 285	57.11.4103	10 kOhm	2% • 0 • 25 W • MF	
R = = 286	57.11.4339	3.3 Ohm	2% 0.25W MF	
R287	57.11.4472	4.7 kOhm	2%, 0.25W, MF	
R • • • 288	57-11-4103	10 kOhm	2%, 0.25W, MF	
R • • • 289	57.11.4471	470 Ohm	2%, 0.25W, MF	
R290	57.11.4391	390 Ohm	2%, 0.25W, MF	
R291	57.11.4152	1.5 kOhm	2%, 0.25W, MF	
R • • • 292	57.92.1151	18 Ohm	. 150mA, PTC	
R • • • 293	57.11.4180	16 Ohm	2%, 0.25W, MF	
R294	57-11-4470	47 Ohm	2%, 0.25W, MF	
T 2	1.022.451.00	1:0.62	Line Input Trafo	St
T • • • • 3	1.022.271.00		Erase Trafo	St
T4	1-022-272-00		Bias Trafo	St
T • • • • 6	1.022.355.00		Line Output Trafo	St
TP1	54.02.0320		Plug 2+8*0+8	AMP
TP • • • • 2	54.02.0320		P1ug 2.8≑0.8	AMP
TP3	54.02.0320		Plug 2.8≎0.8	AMP
TP • • • • 4	54.02.0320		Plug Z.8=0.8	AMP
DER (C	00) 87/05/20 GP	AUDIO EL	ECTRONICS BOARD TD 1.727.461.	00 PAGE 13

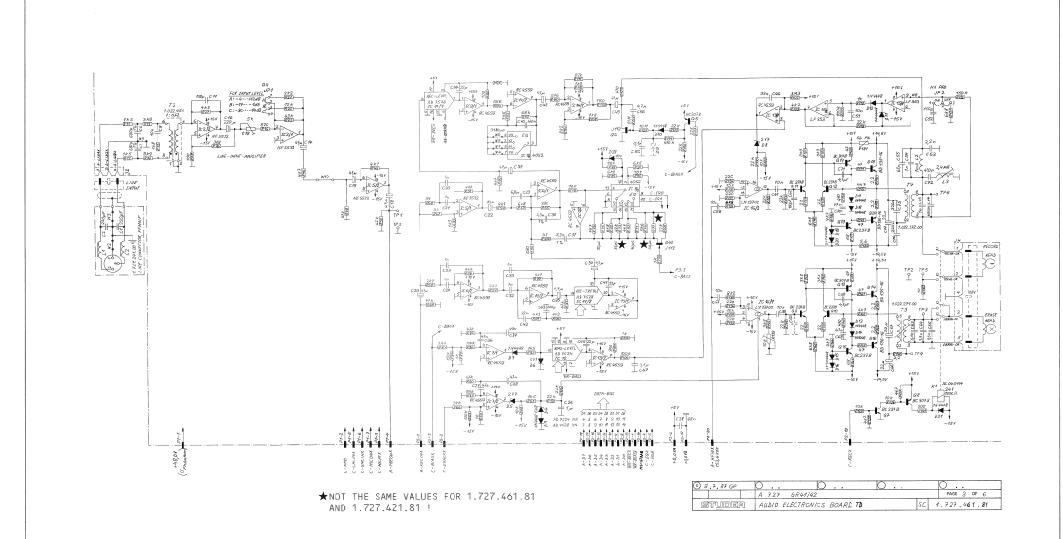
MANUF	UIVALENT	SPECIFICATIONS / EQ	VALUE	PART NO.	POS • NO •	I ND .
AMP		Plug 2.800.8		54.02.0320	TP5	
AMP		Plug 2.8*0.8		54.02.0320	TP • • • • 0	
AMP		Plug 2.8≎0.8		54.02.0320	TP 7	
		wire bridge		64.01.0106	W 3	
		not used			W4	
		Wire Bridge		64.01.0106	W 5	
		not used			W6	
		Wire Bridge		64.01.0106	W • • • • • 7	
		Wire Bridge		64.01.0106	W8	
		Wire Bridge		64.01.0106	W10	
		Wire Bridge		57.11.4000	W11	
		IC Socket	6-Pole	53.03.0166	XIC2	
		IC Socket	8-Pole	53.03.0166	XIC • • • 5	
		IC Socket	8-Pole	53.03.0166	XIC6	
		IC Socket	8-Pole	53.03.0166	XIC7	
		IC Socket	16-Pole	53.03.0168	XIC8	
		IC Socket	8-Pole	53.03.0166	XIC • • • 9	
		IC Socket	8-Pole	53.03.0166	XIC 10	
		IC Socket	20-Pole	53.03.0165	XIC 11	
		1C Socket	16-Pole	53.03.0168	XIC 12	
		IC Socket	8-Pole	53.03.0166	XIC ••13	
		IC Socket	8-Pole	53.03.0166	XIC14	
		IC Socket	8-Pole	53.03.0166	XIC • • 15	
		IC Socket	16-Pole	53.03.0168	XIC • • 16	
		IC Socket	16-Pole	53.03.0168	XIC17	
		IC Socket	16-Pole	53.03.0168	XIC18	
		IC Socket	8-Pole	53.03.0166	XIC19	
		IC Socket	8-Pole	53.03.0166	XIC20	
		IC Socket	8-Pole	53.03.0166	XIC • • 21	
		IC Socket	8-Pole	53.03.0166	XIC 22	
		IC Socket	20-Pole	53.03.0165	XIC23	
		IC Socket	8-Pole	53.03.0166	XIC • • 24	
		IC Socket	8-Pole	53.03.0166	XIC • • 25	
		IC Socket	16-Pole	53.03.0168	XIC26	
		IC Socket	8-Pole	53.03.0166	XIC 27	

IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.

ORIG 87/05/20
S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD TD 1-727-461-00 PAGE 15

AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42
AUDIO ELECTRONICS (O VU) 1.727.421.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)



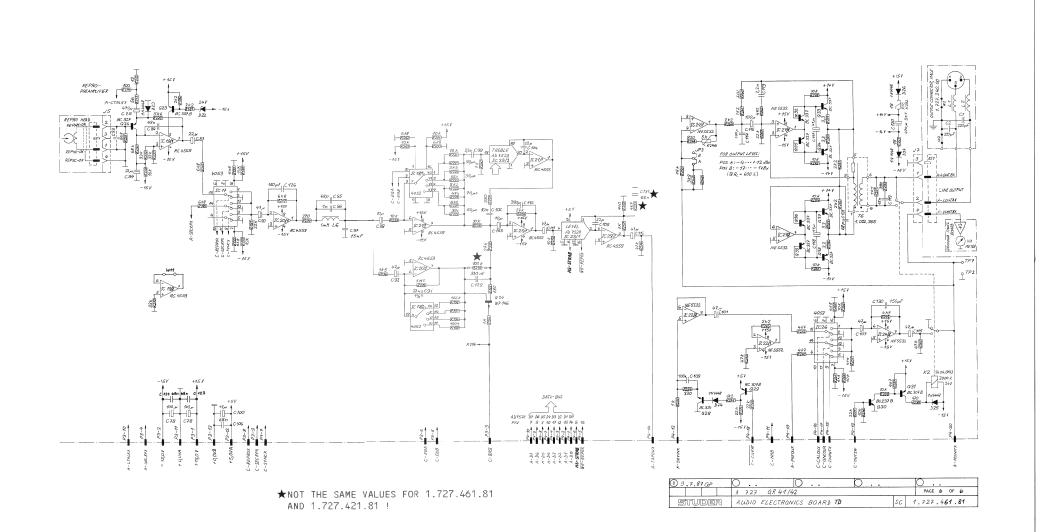


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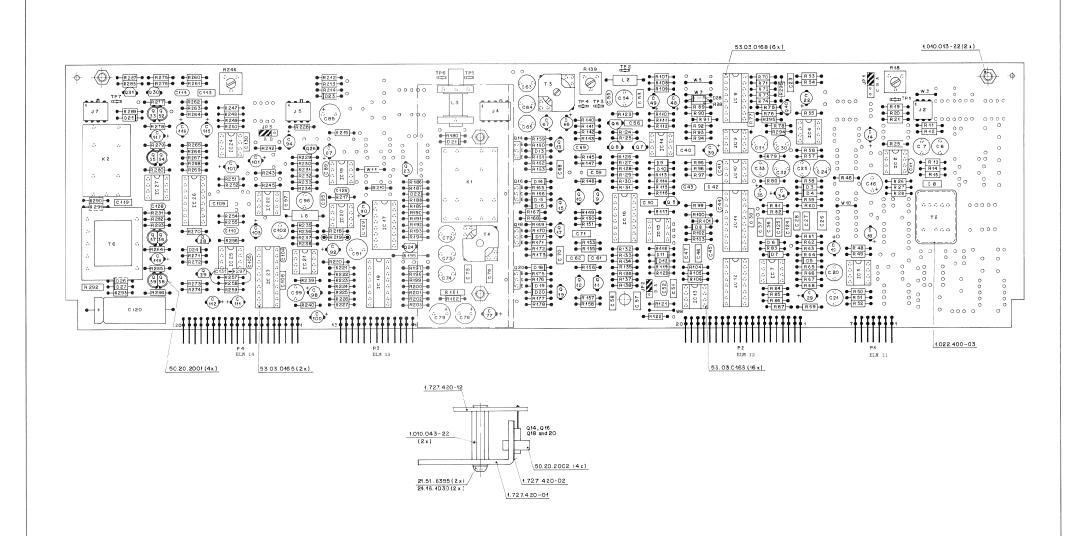
AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42
AUDIO ELECTRONICS (O VU) 1.727.421.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)







AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42





### AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42

DIO ELECTRONICS (	U VU) 1.727.461.81 GRP2	+1/42	Andrews		
ND. POS.NC. PART NO. VAL	LUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.AG. PART NC. VALUE SPECIFICATIONS / EQUIVALENT	HANUF.	IND. PCS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE.
C	net 100 59V PETP per 100, 59V PETP per 100, 59V Cert utf -2-020 6-1V Cert utf -2-021 10V EL utf -2-022 59V PP net 2-55 59V PP	D		011 50.03.9151 0.2076 matched with 031 NPN match	
C. 17 30-66-0713 47 7 C. 19 31-66-0713 47 7 C. 19 31-66-0713 32 34 7 C. 10 31-66-0713 47 7 C. 10 31-6	uf20% 3VV EL	Dec.   27   50.04-0125   10.04   10.	519 519 50 50 60 60 60 60 60 60 60 60 60 60 60 60 60	R	4130 3.1.1.4.200 22 000 22 000 24.0.0.5% YF  4130 3.1.1.4.200 22 03 000 24.0.0.5% YF  4130 3.1.1.4.210 470 000 24.0.0.5% YF  4130 3.1.1.4.210 470 000 24.0.0.5% YF  4130 3.1.1.4.200 22 000 24.0.0.5% YF  4130 3.1.1.4.200 47 000 24.0.0.5% YF  4131 4
ID- POS-NO- PART NO. VAL		180- POS-RO- PART NC. VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT NAME.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF
C	pf   100, 50 V Cerp   100, 50 V Cerp   100, 50 V PEPP   1		NS THE	800 37-11-14-572 at 1 ECRM 23, 0-25% AF RESERVED AND ADDRESS A	
OND. POS.NC. PART NO. VAL	LUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. PDS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	HANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MAMP.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIPALENT MANUF.
C53 C53 C54 C55 C56 C56 C57 C58 C58 C58 C59 C59 C59 C59 C59 C59 C59 C59 C59 C102 C102 C103 C10	pfer 100. 59V Ger  210. 59V PETP  40 P - 200. 33V EL  40 P - 200. 31V EL  40 P - 200. 10V EL  40 P - 200.	PR 01 1.777.403.01 1 pcs	St.	R	**************************************



# AUDIO ELECTRONICS (O VU) 1.727.461.81 GRP41/42

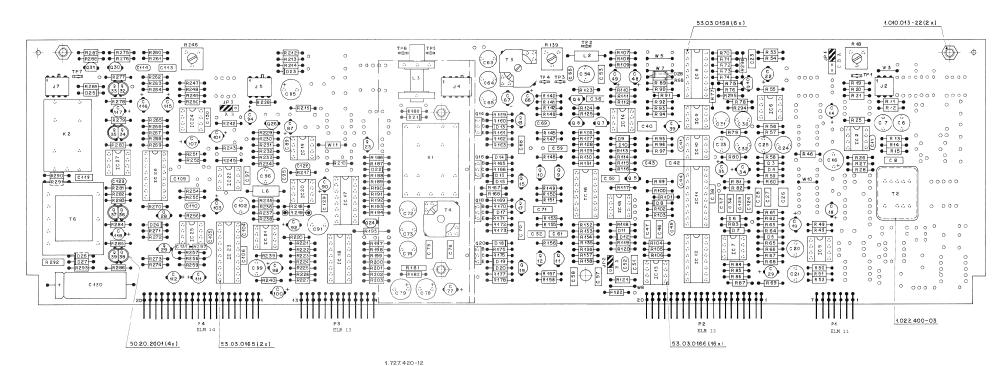
ND .	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIV	ALENT	MANUF
	R266	57.11.4103				
	R267	57.11.4682	6-8 kOhm	2%. 0.25W. MF		
	R • • • 268 R • • • 269	57.11.4682 57.11.4103	6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	K Z / U	57.11.4472	4.7 kOhm	2% + 0 + 25W + MF		
	R • • • 271 R • • • 272	57.11.4122 57.11.4223 57.11.4223	1.2 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 273	57-11-4223	ZZ kUhm	2%, 0.25w, MF		
	R274	57.11.4473 57.11.4223	47 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R • • • 275 R • • • 276	57.11.4223	10 kOhm	2%, 0.25W, MF		
	R277	57.11.4339 57.11.4103 57.11.4103	3.3 Ohm	2%, 0.25W, MF		
	R • • • 278 R • • • 279	57-11-4103	10 kUhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R280 R281	57.11.4339	3.3 Ohm	2%, 0.25W, MF		
	R 281	57-11-4222 57-11-4222	2.2 kOhm	2% 0.25W MF 2% 0.25W MF		
	R 283	57+11+4339	3.3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R284 R285	57-11-4103 57-11-4103	10 kOhm	2%, 0.25W, MF		
	R286	57-11-4339	3.3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R287	57.11.4472 57.11.4103	10 kOhm	2%, 0.25W, MF		
	R289	>7.11.4471	470 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R290 R291	57.11.4391 57.11.4152	390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF		
	R292	57.92.1151	18 Ohm	150mA, PTC		
	R293 R294	57.11.4180 57.11.4470	18 Ohm	2%+ 0+25W+ MF 2%+ 0+25W+ MF		
	R * * * 295	57.11.4223	22 kOhm	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF		
	R296	57-11-4105	10 kOhm 6-8 kOhm 1-2 kOhm 1-7 kOhm 1-2 kOhm 22 kOhm 22 kOhm 10 kOhm 11 kOhm 11 kOhm 11 kOhm 11 kOhm 12 kOhm 12 kOhm 12 kOhm 13 Ohm 14 kOhm 15 kOhm 16 kOhm 17 kOhm 18 Ohm 19 kOhm 19 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
	R297	57.11.4472				
	T • • • • 2	1.022.451.00	1:0.62	Line Input Trafo		St St
	T • • • • • 3 T • • • • • 4	1.022.271.00		Erase Trafo Bias Trafo		St.
	T *** * * 6	1.022.355.00		Bias Trafo Line Output Trafo		St
τυ	DER (	00) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD TO	1-727-461-81	PAGE 1
	POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIV	VAL ENT	MANUF
	TP1	54.02.0320	VALUE	Plug 2.8÷0.8	VALENT	AMP
	TP1 TP2 TP3	54.02.0320 54.02.0320 54.02.0320	VALUE	Plug 2.8÷0.8	VALENT	AMP AMP AMP
	TP1 TP2 TP3 TP4	54.02.0320 54.02.0320	VALUE	Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	VALENT	AME AME AME AME AME
	TP····1 TP····2 TP····3 TP····4 TP····5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320	VALUE	Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8÷0.8	YALENT	AME AME AME AME AME
	TP····1 TP····2 TP····3 TP····4	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320	VALUE	Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	WALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP4 TP5 TP6 TP6	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320	VALUE	Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP4 TP5 TP6 TP7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.02.0320	VALUE	Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP4 TP5 TP6 TP7 W3 W4 W5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.02.0320 64.01.0106	VALUE	Plug 2,800.6 Plug 2,800.8 Plug 2,800.8 Plug 2,800.8 Plug 2,800.8 Plug 2,800.8 Plug 2,800.8 Plug 2,800.8 Hiro Bridge not used	VALENT	MANUE AMP AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP5 TP6 TP7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.02.0320 64.01.0106 64.01.0106	VALUE	Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Wire Bridge not used Wire Bridge not used wire Bridge	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP6 TP6 TP7 W3 W7 W8 W7 W8	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106	VALUE	Plug 2.800.8 Wire Bridge not used Wire Bridge	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP4 TP5 TP6 TP7 W3 W4 W5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.02.0320 64.01.0106	VALUE	Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8 Wire Bridge not used Wire Bridge not used wire Bridge	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP4 TP5 TP6 TP7 W3 W10 W11 XIC2	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0105 57.11.4000	3-Pole	Plug 2.8°0.8 Plug 2.8°0.8 Plug 2.8°0.8 Plug 2.8°0.8 Plug 2.8°0.8 Plug 2.8°0.8 Plug 2.8°0.8 Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP5 TP6 TP7 W3 W5 W7 W10 W11 XIC2 XIC5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 57.11.4000 53.03.0166	8-Pole	Plug 2.8-0.8 Wire Bridge not used Wire Bridge	VALENT	AMP AMP AMP AMP AMP
	TP1 TP2 TP3 TP5 TP6 TP7 W3 W4 W5 W10 XIC2 XIC5	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0105 57.11.4000	8-Pole 8-Pole 8-Pole	Plug 2,8-0.6 Plug 2,8-0.8 Plug 2,8-0.8 Plug 2,8-0.8 Plug 2,8-0.8 Plug 2,8-0.8 Plug 2,8-0.8 Wire Bridge not used wire Bridge wire Bridge wire Bridge wire Bridge wire Bridge wire Bridge ic Socket IC Socket IC Socket	VALENT	AME AME AME AME AME
	TP1 TP2 TP3 TP6 TP6 TP7 H3 H9 H10 XIC2 XIC5 XIC6 XIC7 XIC7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 57.01.0106 53.03.0166 53.03.0166	S-Pole B-Pole B-Pole S-Pole	Plug 2.800.8 Wire Bridge not used Wire Bridge	VALENT	AME AME AME AME AME
	TP1 TP2 TP3 TP6 TP6 TP7 H3 H9 H10 XIC2 XIC5 XIC6 XIC7 XIC7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 57.11.4000 53.03.0166 53.03.0166 53.03.0166	B-Pole B-Pole B-Pole 16-Pole B-Pole	Plug 2.8*0.8 Wire Bridge not used Wire Bridge wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket IC Socket IC Socket IC Socket	VALENT	AME AME AME AME AME
	TP1 TP2 TP3 TP4 TP5 TP6 TP7  H3 H5 TP6 TP7  H5 TP7  H7  H5 TP7  H5 TP7  H5 TP7  H5 TP7  H7  H.	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 63.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	3-Pole 8-Pole 5-Pole 16-Pole 8-Pole 8-Pole 20-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge wire Bridge wire Bridge Wire Bridge Wire Bridge IC Socket IC Socket IC Socket IC Socket IC Socket	VALENT	AME AME AME AME AME
	TP1 TP2 TP3 TP4 TP5 TP6 TP7 H3 H10 H10 XIC2 XIC5 XIC6 XIC7 XIC8 XIC9 XIC9 XIC9 XIC9 XIC10 XIC10 XIC11	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 65.03.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 8-Pole 6-Pole 8-Pole 20-Pole	Plug 2.80.8 Wire Bridge mot used Wire Bridge Wire Brid	VALENT	AME AME AME AME AME
	TP1  TP2  TP3  TP4  TP5  TP5  TP7  H5  H5  H5  XIC2  XIC5  XIC5  XIC5  XIC5  XIC12  XIC12  XIC13	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	B-Pole B-Pole B-Pole B-Pole B-Pole B-Pole B-Pole B-Pole B-Pole B-Pole	Plug 2.8-0.6 Plug 2.8-0.8 Wire Bridge not used wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge LC Socket	VALENT	AME AME AME AME AME
	TP1 TP2 TP3 TP4 TP5 TP7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 20-Pole 16-Pole 8-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge IC Socket	VAL ENT	AME AME AME AME AME
	TP1 TP2 TP3 TP4 TP5 TP7 TP	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0165 53.03.0165 53.03.0165 53.03.0165 53.03.0165	8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 20-Pole 16-Pole 8-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge IC Socket	VALENT	AME AME AME AME AME
	TP 1 TP 2 TP 3 TP 4 TP 5 TP 7 H 5 H 5 H 10 H 10 H 11 XIC 2 XIC 6 XIC 6 XIC 17 XIC 12 XIC 13 XIC 14 XIC 15 XIC 16 XIC 16 XIC 16 XIC 16 XIC 16	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	3-Pole 8-Pole 8-Pole 8-Pole 9-Pole 9-Pole 10-Pole 10-Pole 10-Pole 10-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge U. Socket I. Socket	VALENT	AME AME AME AME AME
	TP1  TP2  TP3  TP4  TP5  TP5  TP7  W3  W10  W10  W11  XIC2  XIC5  XIC5  XIC5  XIC5  XIC11  XIC12  XIC13  XIC14  XIC15  XIC15  XIC15  XIC15  XIC16  XIC17	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 63.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	3-Pole 8-Pole 8-Pole 8-Pole 9-Pole 9-Pole 10-Pole 10-Pole 10-Pole 10-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge U. Socket I. Socket	VALENT	AME AME AME AME AME
	TP1  TP2  TP3  TP4  TP5  TP5  TP7  W3  W10	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 63.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	3-Pole 8-Pole 8-Pole 8-Pole 9-Pole 9-Pole 10-Pole 10-Pole 10-Pole 10-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge U. Socket I. Socket	VALENT	AME AME AME AME AME
	TP1 TP2 TP3 TP5 TP5 TP7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.0106 64.01.010	3-Pole 8-Pole 8-Pole 8-Pole 8-Pole 9-Pole 10-Pole 14-Pole 16-Pole 16-Pole 16-Pole 16-Pole 18-Pole 8-Pole 8-Pole 8-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge Wi	VALENT	AME AME AME AME AME
	TP1  TP2  TP3  TP4  TP5  TP5  TP7  W3  W10	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 63.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	3-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 6-Pole 6-Pole 16-Pole 16-Pole 16-Pole 16-Pole 26-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	Plug 2.8°0.8 Wire Bridge not used Wire Bridge wire Bridge Wire Bridge Wire Bridge U. Socket		AMI AMI AMI AMI AMI AMI
	TP1 TP2 TP3 TP4 TP5 TP7	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.0106 64.01.010	3-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 6-Pole 6-Pole 16-Pole 16-Pole 16-Pole 16-Pole 26-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole 8-Pole	Plug 2.850.8 Wire Bridge Mire Bridg	1.727.461.81	AMI AMI AMI AMI AMI AMI AMI
STU	TP	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 57.11.4000 57.11.4000 57.11.4000 57.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	S-Pole B-Pole B-	Plug 2.8-0.6 Plug 2.8-0.8 Wire Bridge mot used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket IC Soc	1.727.461.81	AME AME AME AME AME AME
STU	TP1  TP2  TP3  TP4  TP5  TP5  TP7  W3  W4  W5  W10  W	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0168	B-Pole B-Pole S-Pole B-Pole B-	Plug 2.80.6 Plug 2.80.6 Plug 2.80.8 Wire Bridge dire Bridge dire Bridge Wire Bridge IC Socket IC S	1.727.461.81	AME AME AME AME AME AME
STU	TP	54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 54.02.0320 64.01.0106 64.01.0106 64.01.0106 64.01.0106 64.01.0106 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0166	B-Pole B-Pole S-Pole B-Pole B-	Plug 2.8-0.6 Plug 2.8-0.8 Wire Bridge mot used Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge Wire Bridge IC Socket IC Soc	1.727.461.81	AME AME AME AME AME AME AME

S T U D E R (00) 87/07/09 GP AUDIO ELECTRONICS BOARD TD 1.727.461.81 PAGE 15

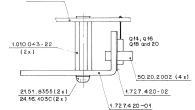


#### AUDIO ELECTRONICS (O VU) 1.727.421.81 GRP41/42

STUDER



IND.	P05-NO-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	A1	1.727.461.81		AUDIO ELECTRONICS BOARD TD	
	C131	59+06+0474	0.47uF	10%. 50V. PETP	
	MP10	1.727.421.10	1 pcs	No. Label	
	R73 R76 R77 R219 R297	57-11-4104 57-11-4682 57-11-4563 57-11-4473 57-11-4182	100 k0hn 6.8 k0hn 56 k0hn 47 k0hn 1.8 k0hn	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF, with socket 2%, 0.25%, MF	



3 / 8 4 | 57940250 | 6.8 kOhm 0.1 % 0.25 N MF 2 3 / 8 4 | 14.3 kOhm 0.1 % 0.25 N MF 2 3 / 8 4 | 57940159 | 680 Ohm 0.1 % 0.25 N MF

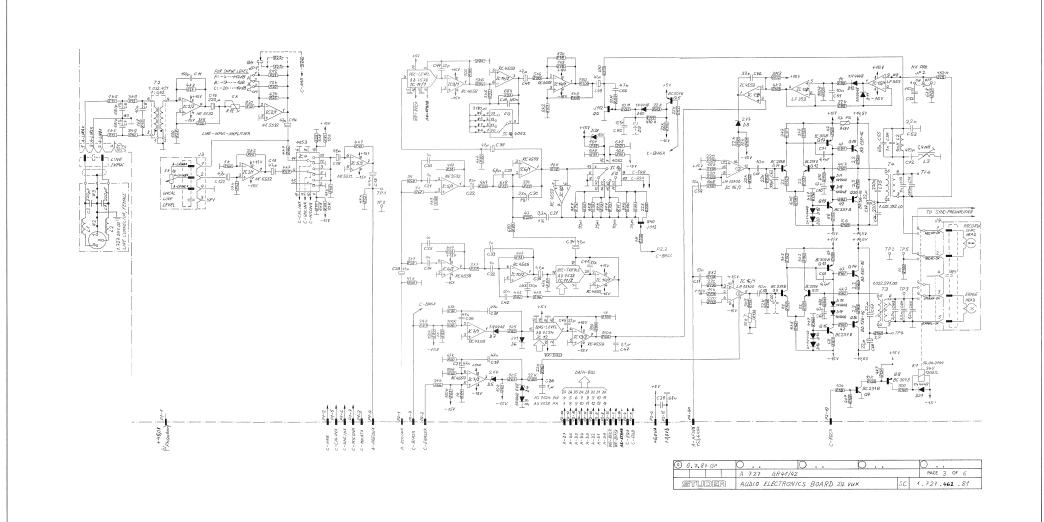
S T U D E R (00) 87/12/18 GP AUDIO ELECTRON. TD (SERVICE) 1.727.421.81 PAGE 1

AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32) - LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

A807



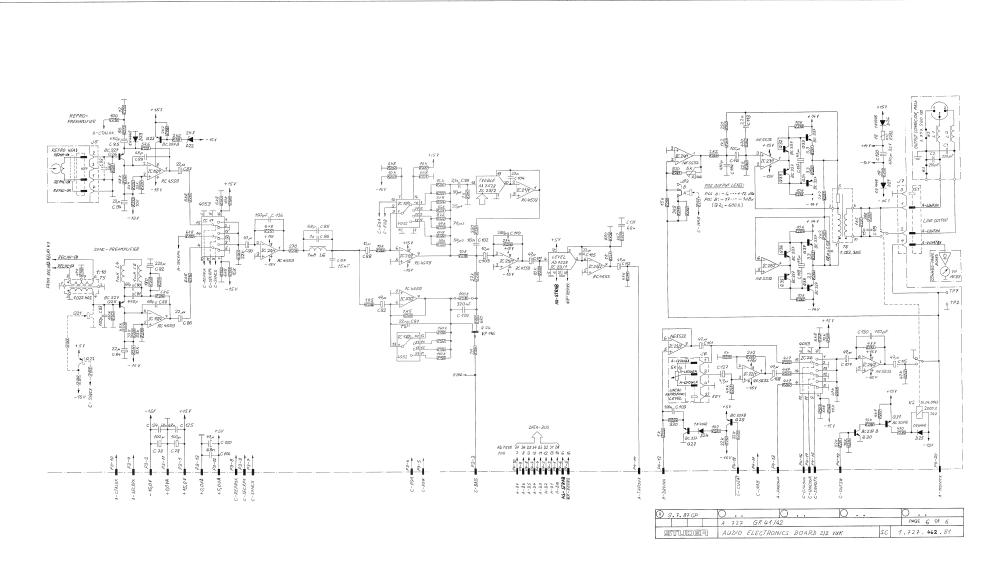
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AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32) - LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)



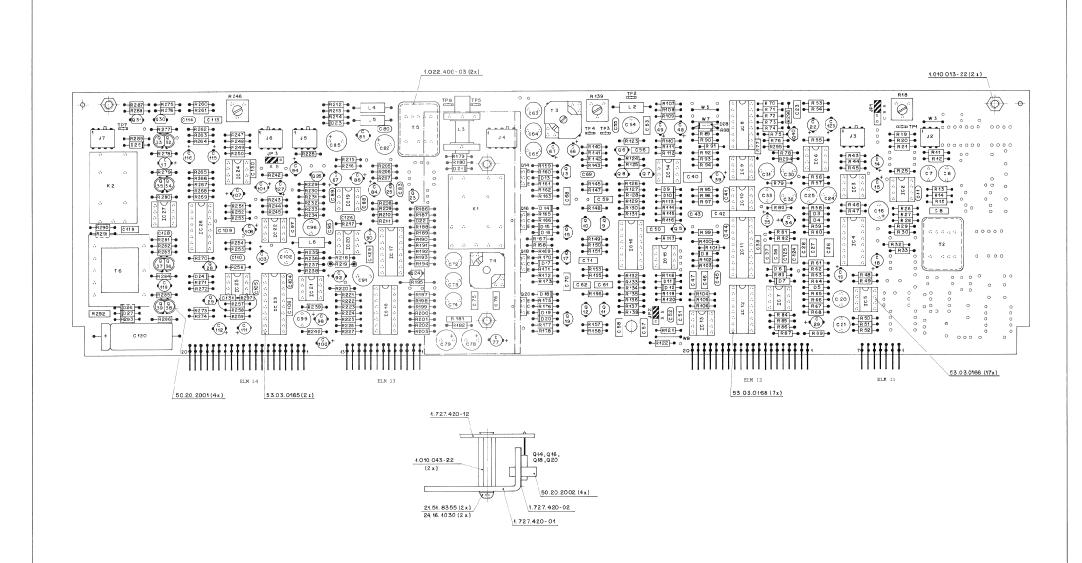
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AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42

STUDER



STUDER A807 7/72



### AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42

TO ELECTRONI		K (2 VU) 1.727.402.8	GRP41/42							***************************************			
POS•NO• PART NO•	VALUE	SPECIFICATIONS / EQUIVALENT MANUF	TAD. POS.KO. PART NO. VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	INO. POS.NO. PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF. I	ND. 205.NO.	PART NO.	VALUE SPECIFICATIONS / EUUIVALENT	MA NU
C	150 pf 47 uf 47 uf 220 uf 47 uf 47 uf 47 uf 10 uf 10 uf 1 nf 1 nf 1 nf 1 nf 1 uf 1 u	11: 50V PP 11: 50V PP 11: 50V PP 11: 50V Cer 12: 10: 10: 10: 10: 10: 10: 10: 10: 10: 10	C124 9-0-0-0-0-0-1 68 n F C125 9-0-0-0-0-0-1 68 n F C126 5-8-3-4-1-1 150 n F C128 5-8-3-4-10 69 n F C128 5-3-4-10 69 n F C129 5-0-0-1-3-1 330 n F C131 9-0-0-1-3-1 180 n F C131 9-0-0-1-12 180 n F C131 9-0-0-112 0-1 180 n F C131 9-0-0-112 0-1 180 n F C131 9-0-0-112 180 n F C131 180 n F C1	100 SOV PETP 100 SOV CETP 100 SOV CET 100 SOV PETP 100 SOV PET		0   0   90 - 3 - 40 3 6	8C2378 8C2378 8C2378 8C3078 8C3078 80135-16 8C2378 80135-16 8C2378 80136-16 8C2378 80136-16	BC547B, BC556B NPN BC547B, BC556B NPN BC547B, BC556B NPN BC557B, BC566B PNP BC557B, BC566B PNP BC557B, BC566B PNP BC557B, BC566B PNP BC57B, BC566B PNP	Mot	1	57-11.4472 4-7 57-11.4912 1 57-11.4912 1 57-11.491 1 57-11.491 1 57-11.491 1 57-11.492 1 5	Schne 22, 0.75% WF Kötne 24, 0.75% MF Chan 24, 0.75% MF Chan 24, 0.75% MF Chan 25, 0.75% MF Chan 27, 0.75% MF Chan 27, 0.75% MF Chan 27, 0.75% MF Chan 28, 0.75% MF Chan 28, 0.75% MF Chan 21, 0.75% MF Chan 21, 0.75% MF Chan 22, 0.75% MF Chan 21, 0.75% MF Chan 22, 0.75% MF Chan 22, 0.75% MF Chan 23, 0.75% MF Chan 24, 0.75% MF Chan 24, 0.75% MF Chan 24, 0.75% MF Chan 24, 0.75% MF Chan 25, 0.75% MF Chan 25, 0.75% MF Chan 27, 0.75% MF	
C 27 99-06-0473 C 28 99-06-0473 C 28 99-06-173 C 31 99-06-183 C 33 99-06-183 C 34 99-06-183 C 35 99-06-183 C 36 99-06-183 C 37 99-06-183 C 38 99-06-183 C 39 99	1 up 47 np 343 np 1 np 47 up 4	-201 100 EP  -201 100 EP  -201 200 PP  -201 500 PP  -201 300 EL  -201 300 EL  -201 500 PETP  101 500 PETP	010 50.0.0125 184468 012 50.0.0125 184668 012 50.0.0125 184668 013 50.0.0125 184668 013 50.0.0125 184668 013 50.0.0125 184668 014 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 017 50.0.0125 184668 022 50.0.0125 184668 022 50.0.0125 184668	5% 0.4% Zener  not used 5  10 to 20 to 21  50 to 21		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	80327 80337-25 803078 803078 803078 80337 80327 80327 80327 80327 80327 112	The state of the s	Mot	8 120 8 121 8 122 8 124 8 124 8 125 8 126 8 127 6 128 8 127 6 128 8 127 6 133 8 131 8 135 8 136 8 137 8 136	37.11.400 100 100 17.11.400 10	School   225   0.259   0.59	
C45 59.34-2120 C45 59.43-2120 C45 59.05-0133 C47 59.05-0104 U D E R (00) 67/07/09 (	100 nF	101 50V Cer 101 50V Cer 101 50V PETP 101 50V PETP LECTRON:CS BOARD 2/2YUK 1-727-462-81 PAGE	IC2 50-09-0105 NE 5532	Oual Op. Amp.	Sig PAGE 4	R	1.5 kChm 1.5 kChm 3.9 kChm 3.9 kChm 1.8 kChm 5 kChm	2%, 0,25%, 9F 10%, 0,25%, 9F	GE 7 S	1 1 3 4		Ohn 28, 0.294 MF  KOHN 28, 0.294 MF  KOHN 28, 0.294 MF  KOHN 28, 0.294 MF  KOHN 108, 0.5 M, PMG  JULY 1, 1727-462.	.81 PAGE
POS-NO. PART NO.		SPECIFICATIONS / EQUIVALENT MANUF		SPECIFICATIONS / EQUIVALENT	MANUF.	ING. POS.NG. PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF. I	IND. POS.NO.	PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	МА
C	3 10 nf 10 pf 10 pf 3 3 mf 3 3 mf 3 3 mf 10 pf 1	-003 10V EL -010 10V PEP -010 1	113 50.09.0109 ME 5322 113 50.09.0109 ME 5322 113 50.09.0109 ME 5323 1110 50.09.0109 ME 5323 1123 50.09.0109 ME 5323 1124 50.00.0009 ME 5323 1125 50.09.0109 ME 5323 1125 50.09.0109 ME 5323 1125 50.09.0109 ME 5323 1125 50.09.0109 ME 5323 1127 50.09.0109 ME 5323 1128 50.09.0109 ME 5323 1129 50.09.0109 ME 5323	Dual GP. Amp.  CHOS And Gp. Switch  Dual GP. Amp.	Sig People Rea Rea Rea Rea Rea Rea Rea Rea Rea Re	1	920 Che 12 kithin 2.1 kithin 2.1 kithin 3.1 kithin 3.2 kithin 3.2 kithin 3.0	220 0.25% of F 220 0.	ce a s	4140 4141 4142 4142 4142 4142 4142 4144 4144 4151 4152 4152 4153 4154 415		Dan 22. 0.25% WF  Dan 23. 0.25% WF  Cohe 24. 0.25% WF  Cohe 25. 0.25% WF  Cohe 27. 0.25%	.81 PAGE
POS.NO. PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	ING. POS.NO. PART NO. VALUE	SPECIFICATIONS / EQJIVALENT	MANUF.	IND. POS.NO. PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF • I	IND. 205.NO.	PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	
C. 185 97-22-2470  C. 186 97-22-2520  C. 187 97-22-	47 uF 10 uF 10 uF 22 pF 23 pF 41 uF 41 uF 41 uF 47 uF 100 uF	-201 6-34 EL -201 2-25 EL -201	8. 1 50-0-0144 490  8. 2 50-0-0143 290  1. 2 62-0-0143 290  1. 2 62-0-0143 290  1. 3 1-171-11-09 2-0-014  1. 9 52-0-10-128 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Relay ZVV 1200 Ome Relay ZVV 2000 Um  Contact Fin JP1 Contact Fin JP2 Contact Fin JP2 Contact Fin JP2 Rivet Not MP2 Rivet Not MP	51 51 51 51 51 51 51 51 51 51 51 51 51 5	8 7 7 11.4962 8 7 7 11.4963 8 8 8 7 11.4963 8 10 27.11.4963 8 10 27.11.4963 8 13 27.11.4963 8 13 27.11.4963 8 14 27.11.4963 8 15 27.11.4963 8 16 27.11.4963 8 17 27.11.4963 8 18 27.11.4963 8 19 27.11.4963 8 10 27.11.4963 8 10 27.11.4963 8 10 27.11.4963 8 10 27.11.4963 8 10 27.11.4963 8 10 27.11.4963 8 10 27.11.4963 8 10 27.11.4963	24 kOnn 3 kOnn 41 kOnn 3 kOnn 41 kOnn 3 kOnn 41 kOnn 150 k	25 0.25% #F 26 0.25% #F 27 0.25% #F 28 0.25% #F 28 0.25% #F 28 0.25% #F 29 0.25% #F 20 0.25% #F 21 0.25% #F 22 0.25% #F 23 0.25% #F 24 0.25% #F 25 0.25% #F 25 0.25% #F 26 0.25% #F 27 0.25% #F 28 0.25% #F		- 183 - 184 - 184 - 184 - 184 - 185	77-114-7223 22 77-114-7223 22 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10 77-114-713 10	Not used	

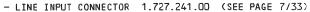


# AUDIO ELECTRONICS VUK (2 VU) 1.727.462.81 GRP41/42

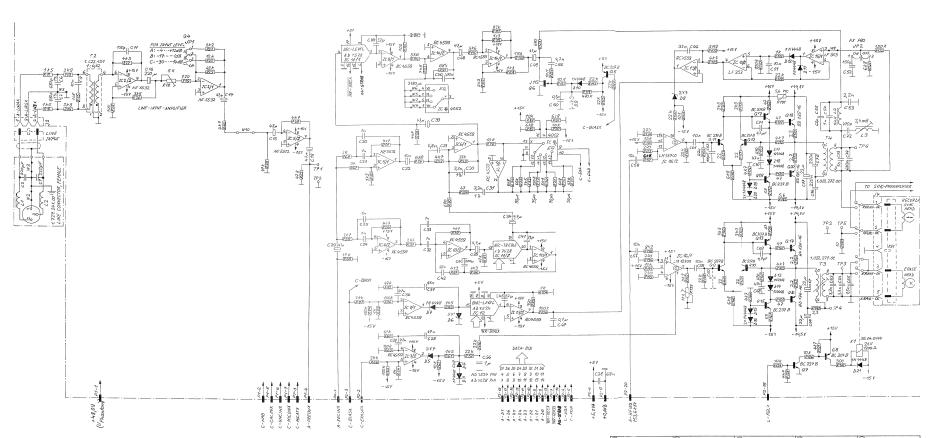
	P05.N0.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.		P05.N0.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	R • • • 220 R • • • 221	57-11-4103	10 kOhm	2%, 0.25W, MF not used			XIC •• 13 XIC •• 14	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket	
	R • • • 222 R • • • 223 R • • • 224	57.11.4822 57.11.4473 57.11.4682	8.2 kOhm 47 kOhm 6.8 kOhm	2%, 0.25We MF 2%, 0.25We MF 2%, 0.25We MF			XIC15 XIC16 XIC17	53.03.0166 53.03.0168 53.03.0168	8-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket	
	R • • • 225 R • • • 226 R • • • 227	57-11-4393 57-11-4392 57-11-4563	39 kDhm 3∙9 kOhm 56 kOhm	2%, 0-25%, MF 2%, 0-25%, MF 2%, 0-25%, MF			XIC18 XIC19 XIC20	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R • • • 228 R • • • 229 R • • • 230	57-11-4563 57-11-4562 57-11-4683	56 kOhm 5•6 kOhm 68 kOhm	2%, 0.25W. MF 2%, 0.25W. MF 2%, 0.25W. MF			XIC21 XIC22 XIC23	53.03.0166 53.03.0166 53.03.0165	8-Pole 8-Pole 20-Pole	IC Socket IC Socket IC Socket	
	R • • • 2 31 R • • • 2 32 R • • • 2 33	57.11.4333 57.11.4333 57.11.4103	33 kOhm 33 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF			XIC • • 24 XIC • • 25 XIC • • 26	53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket	
	R • • • 234 R • • • 235	57.11.4271 57.11.4273 57.11.4152	270 Onm 27 kOhm 1•5 kOhm	2 % 0 • 25 W • M F 2% • 0 • 25 W • M F 2% • 0 • 25 W • M F			X1C • • 27	53.03.0106	6-Pole	IC Sucket	
	R • • • 236 R • • • 237 R • • • 238 R • • • 239	57.11.4331 57.11.4103 57.11.4103	330 Ohm 10 kOhm 10 kOhm	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF							
	R • • • 240 R • • • 241 R • • • 242	57.11.4102 57.11.4472	1 kOhm	2%, 0.25%, MF not used 2%, 0.25%, MF							
	R • • • 243 R • • • 244	57•11•4473 57•11•4102	47 kOhm 1 kOhm 2.2 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
	R 245 R 246 R 247	57-11-4222 58-01-8502 57-11-4821	5 kOhm 820 Ohm	10%, 0.5 W, PMG 2%, 0.25W, MF							
	R • • • 240 R • • • 249 R • • • 250	57.11.4392 57.11.4153	3.9 kOhm 15 kOhm	2%, 0-25W, MF not used 2%, 0-25W, MF		Cer = PP =	Ceramic Polypropyle	EL = Electro	olytic PET	P = Polyester = Silicon	
	R • • • 251 R • • • 252 R • • • 253	57•11•4473 57•11•4472 57•11•4472	47 kOhm 4.7 kOhm 4.7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		MANUFA	NS	= Analog Devic = National Sen	es Inc. niconductors	Mot = Motorola Ra = Raytheon	
	R • • • 254 R • • • 255 R • • • 256	57.11.4331 57.11.4102 57.11.4273	330 Ohm 1 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		ORIG 6	Sig 87/07/09	= Signetics		St = Stûder	
rυ		0) 87/07/09 GP		ECTRONICS BOARD 2/2VUK 1.727.462.8	B1 PAGE 13			) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD 2/2VUK 1.727.462.8	1 PAGE
٠.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.						
	R257	57.11.4102 57.11.4471	1 kOhm 470 Ohm	2%, 0.25W, MF 2%, 0.25W, ME							
	R • • • 258 R • • • 259 R • • • 260 R • • • 261	57.11.4103 57.11.4221 57.11.4221	10 k0hm 220 Ohm 1•2 k0hm	2%, 0-25W, MF 2%, 0-25W, MF 2%, 0-25W, MF							
	R • • • 262 R • • • 263	57.11.4471 57.11.4223	470 Ohm 22 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF							
	R 264 R 265 R 266	57.11.4222 57.11.4473 57.11.4103	2.2 kOhm 47 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 267 R • • • 268 R • • • 269	57.11.4682 57.11.4682 57.11.4103	6.8 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R270 R271 R272	57.11.4472 57.11.4122 57.11.4223	4.7 kOhm 1.2 kOhm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF							
	R273 R274 R275	57.11.4223 57.11.4473 57.11.4223	22 k0hm 47 k0hm 22 k0hm	2%+ 0+25W+ MF 2%+ 0+25W+ MF 2%+ 0+25W+ MF							
	R276 R277 R278	57.11.4103 57.11.4339 57.11.4103	10 k0hm 3.3 Ohm 10 k0hm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R279 R280 R281	57•11•4103 57•11•4339 57•11•4222	10 kOhm 3•3 Ohm 2•2 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 282 R • • • 283 R • • • 284	57.11.4222 57.11.4339 57.11.4103	2•2 kOhm 3•3 Ohm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	R • • • 285 R • • • 286 R • • • 287	57.11.4103 57.11.4339 57.11.4472	10 kOhm 3•3 Ohm 4•7 kOhm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF							
	R • • • 288 R • • • 289 R • • • 290	57.11.4103 57.11.4471 57.11.4391	10 k0hm 470 Ohm 390 Ohm	2%+ 0+25W+ MF 2%+ 0+25W+ MF 2%+ 0+25W+ MF							
	R • • • 291 R • • • 292 R • • • 293	57.11.4152 57.92.1151 57.11.4180	1.5 kOhm 18 Ohm 18 Ohm	2%, 0.25W, MF 150mA, PTC 2%, 0.25W, MF							
τυ	D E R (0	0) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD Z/ZVUK 1.727.462.	81 PAGE 14						
0.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF .						
	R • • • 294 R • • • 295 R • • • 296 R • • • 297	57.11.4470 57.11.4223 57.11.4105 57.11.4472	47 Ohm 22 kOhm 1 MOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF							
	T••••2 T••••3	1.022.451.00	1:0.62	Line Input Trafo Erase Trafo	St St						
	T 4 T 5 T 6	1.022.272.00 1.022.402.00 1.022.355.00	1:10	Bias Trafo Sync Trafo Line Output Trafo	St St St						
	TP2	54.02.0320 54.02.0320		Plug 2.8≎0.8 Plug 2.8≎0.8	AMP AMP						
	TP 3 TP 4 TP 5	54.02.0320 54.02.0320 54.02.0320		Plug 2.8¢0.8 Plug 2.8¢0.8 Plug 2.8¢0.8	AMP AMP AMP						
	TP 7	54.02.0320 54.02.0320		Plug 2.8¢0.8 Plug 2.8¢0.8	AMP AMP						
	W3 W4 W5	64.01.0106		Wire Bridge not used Wire Bridge							
	w7 w8	64.01.0106 64.01.0106		not used Wire Bridge Wire Bridge							
	XIC2 XIC3	53.03.0166 53.03.0168	8-Pole 16-Pole	IC Socket							
	XIC 4 XIC 5	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket							
	XIC6 XIC7	53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket							
	XIC8		0-0-1-								
	XIC8 XIC10 XIC11 XIC12	53.03.0166 53.03.0166 53.03.0165 53.03.0168	8-Pole 8-Pole 20-Pole 16-Pole	IC Socket IC Socket IC Socket IC Socket							

AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.00 GRP41/42

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)



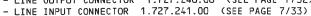




1	18.2.8	7 GP		1) 28,4.87 GP	0	Ю		0	_
				A 727 GR41/4.	2			PAGE 3 OF 6	
	STU		3	AUDIO ELECTRON	ICS BOARD	2/2	SC	1.727.423.00	

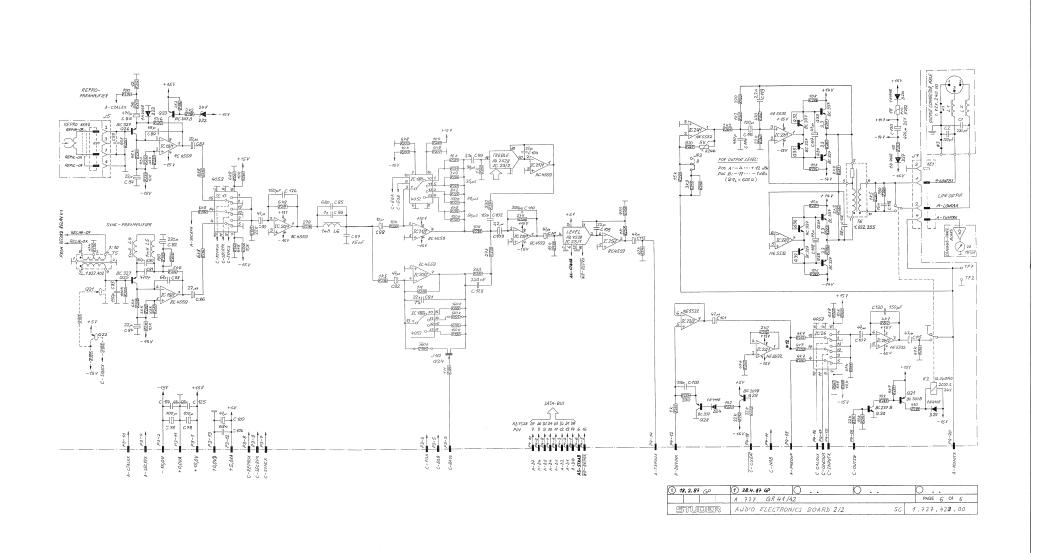
AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

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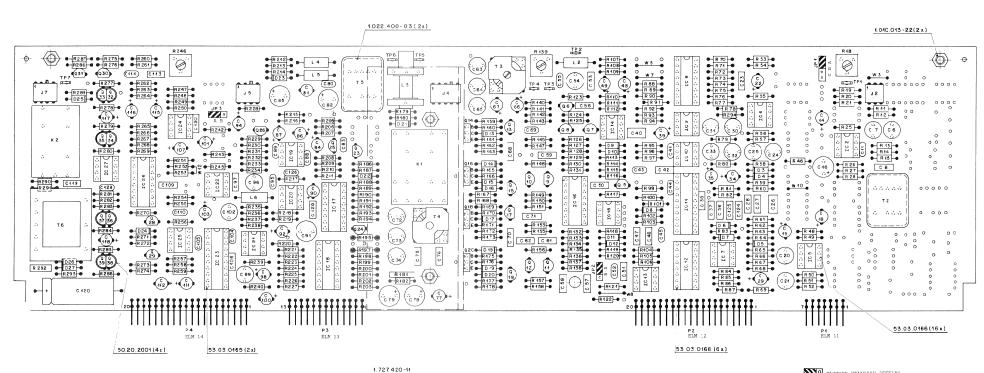


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AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727,423.00 GRP41/42



Q14, Q16 Q18 and 20 1.010.043-22 (2x) 50.20.2002 (4 x) 21.51 . 8355 (2x) 1.727.420-02 24.16.1030 (2 x 1.727.420-01

FACTORY STANDARD SETTING

UDIO ELECTRONICS (2-2 WI	TH CHANNEL SELECTORS ONLY)	1.727.423.00 GRP41/42		·		
INO. POS.NJ. PART NO. VALUE SPECIFI	ICATIONS / EQUIVALENT MANUF. IND. POS.NO.	. PART NO. VALUE SPECIFICATIONS / EQUIVALENT	MA NUF.	IND. P35.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT HANUF.	. IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.
		9 9 100-0224 220 nF 10% 50V FETF  3 510-0125 100-027 25 10% 50V FETF  3 510-0125 100-027 50 0-027 10% 50V FETF  5 510-0125 100-027 50 0-027 10	Sig Sig Sig Sig Sig Sig Sig Sig Sig Sig	011 022 032 033 035 036 036 036 036 036 036 036 036 036 037 0.	NO USES   NO U	
INO. POS.NO. PART NO. VALUE SPECIFI	ICATIONS / SQUEWALENT MANUF. IND. POS-NC		MANUF .	IND. P3S.NO. FART NO.	VALUE SPECIFICATIONS / EQUIVALENT MANUF.	IND. POSEND. PART MG. VALUE SPECIFICATIONS / ENUIVALONT MANUF.
C	18V EL C 50V PETP C 50V	4 50.00-0.017 RE 5-590 Dual 100 Amps   50.00-0.0	ADI ADI BIO BIO BIO BIO BIO BIO BIO BIO BIO BI	### 17 37114471 ### 18 18 18 18 18 18 18 18 18 18 18 18 18	71 0.0 m. 21. 0.2 m. 16 6-08 0.0 m. 22. 0.2 m. 16 6-08 0.0 m. 22. 0.2 m. 16 6-08 0.0 m. 22. 0.2 m. 16 6-10 0.0 m. 22. 0.2 m. 16 10 0.0 m. 22. 0.2 m. 16 11 0.0 0.0 m. 22. 0.2 m. 16 12 0.0 0.0 m. 22. 0.2 m. 16 13 0.0 0.0 m. 22. 0.2 m. 16 14 0.0 0.0 m. 22. 0.2 m. 16 15 0.0 0.0 m. 22. 0.2 m. 16 16 0.0 0.0 m. 22. 0.2 m. 16 17 0.0 0.0 m. 22. 0.2 m. 16 18 0.0 0.0 0.0 m. 22. 0.2 m. 16 19 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	
	ICATIONS / EQUIVALENT MANUF. INO. POS.NC		MANUE.	IND. POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT NANUF.	
C		110.00-03-22 2 pcct	SI S		1-8 c	\$ 1.0   \$7.11.418   \$0.0   \$0.0   \$7.0.079. \$9   \$0.200   \$7.11.418   \$0.0   \$0.0   \$7.0.079. \$9   \$0.200   \$7.11.418   \$0.0   \$



# AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.00 GRP41/42

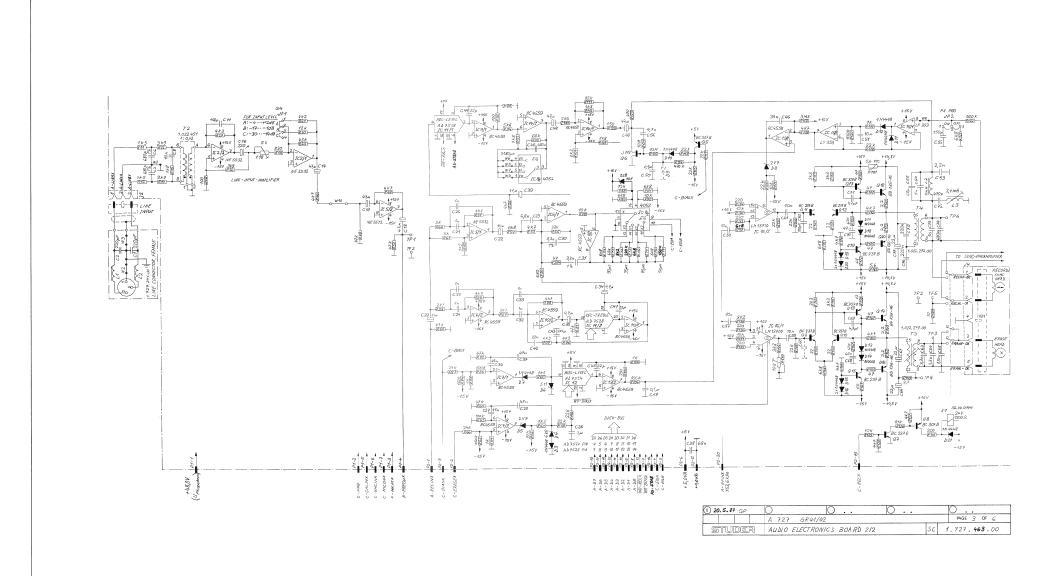
	0 011217 .			- CIIAI	- 44 7 111	, , ,	CONTES	 ODIO
ALENT MANUF.	SPECIFICATIONS / EQUI	VALUE	PART NO.	• POS•NO•	IND.			
	2%, 0.25W, MF 2%, 0.25W, MF 10%, 0.5 W, PMG 2%, 0.25W, MF	47 kOhm 2-2 kOhm 5 kOhm 820 Ohm	57-11-4473 57-11-4222 58-01-8502 57-11-4821	R • • • 243 R • • • 245 R • • • 246 R • • • 247				
	2%, 0.25W, MF not used 2%, 0.25W, MF 2%, 0.25W, MF	3.9 kOhm 15 kOhm 47 kUhm	57-11-4392 57-11-4153 5/-11-4473	R • • • 248 R • • • 249 R • • • 250 R • • • 251				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 4.7 kOhm 330 Ohm	57.11.4472 57.11.4472 57.11.4331	R • • • 252 R • • • 253 R • • • 254				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	1 kOhm 27 kOhm 1 kOhm	57•11•4102 57•11•4273 57•11•4102	R • • • 255 R • • • 256 R • • • 257				
	2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF	470 Ohm 10 kOhm 220 Ohm	57.11.4471 57.11.4103 57.11.4221	R • • • 258 R • • • 259 R • • • 260				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	1.2 kOhm 470 Ohm 22 kOhm 2.2 kOhm	57.11.4122 57.11.4471 57.11.4223 57.11.4222	R • • • 261 R • • • 262 R • • • 263 R • • • 264				
	2% 0.25W MF 2% 0.25W MF 2% 0.25W MF	47 kOhm 10 kOhm 6.8 kOhm	57.11.4473 57.11.4103 57.11.4682	R265 R266 R267				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	6.8 kOhm 10 kOhm 4.7 kOhm	57.11.4682 57.11.4103 57.11.4472	R • • • 268 R • • • 269 R • • • 270				
	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	1.2 kOhm 22 kOhm 22 kOhm 41 kOhm	57.11.4122 57.11.4223 57.11.4223 57.11.4413	R • • • 271 R • • • 272 R • • • 273 R • • • 274				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	22 kOhm 10 kOhm 3•3 Ohm	57.11.4223 57.11.4103 57.11.4339	R 275 R 276 R 277				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 10 kOhm 3•3 Ohm	57•11•4103 57•11•4103 57•11•4339	R278 R279 R230				
1.727.423.00 PAGE 13	ECTRONICS BOARD 2/2	AUDIO ELE	1) 87/04/28 GP	UDER (C	STU			
/ALENT MANUF.	SPECIFICATIONS / EQUI	VALUE	PART NO.	• POS •NO •	IND.			
	2% 0.25W MF 2% 0.25W MF	2.2 kOhm 2.2 kOhm	57.11.4222 57.11.4222	R281 R282				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	3.3 Ohm 10 kOhm 10 kOhm 3.3 Ohm	57-11-4339 57-11-4103 57-11-4103 57-11-4339	R • • • 283 R • • • 284 R • • • 285 R • • • 286				
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 10 kOhm 470 Ohm	57.11.4472 57.11.4103 57.11.4471	R • • • 287 R • • • 288 R • • • 289				
	2%, 0.25W, MF 2%, 0.25W, MF 150mA, PTC 2%, 0.25W, MF	390 Ohm 1.5 kOhm 18 Ohm 18 Ohm	57-11-4391 57-11-4152 57-92-1151 57-11-4180	R290 R291 R292				
St	2%, 0.25W, MF Line Input Trafo	47 Ohm	57-11-4470	R293 R294 T2				
St St St St	Erase Trafo Bias Trafo Sync Trafo Line Output Trafo	1:10	1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	T3 T4 T5 T5				
AMP AMP AMP AMP	Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8		54.02.0320 54.02.0320 54.02.0320	TP 2 TP 3				
AMP AMP AMP	Plug 2.8÷0.8 Plug 2.8÷0.8 Plug 2.8±0.8		54.02.0320 54.02.0320 54.02.0320 54.02.0320	TP4 TP5 TP6				
8111	Plug 2.8÷0.8 Wire Bridge not used		64.01.0106	TP 7 W 3 W 4				
	Wire Bridge not used Wire Bridge		64.01.0106 64.01.0106	W5 W6 W7				
	Wire Bridge Wire Bridge Wire Bridge		64.01.0106 64.01.0106 64.01.0106	W8 W10 W12				
1.727.423.00 PAGE 14	ECTRONICS BOARD 2/2	AUDIO EL	01) 87/04/28 GP	UDER (	STU			
VALENT MANUF.	SPECIFICATIONS / EQUI	VALUE	PART NO.	)• POS•NO•	I ND •			
	IC Socket IC Socket IC Socket	8-Pole 8-Pole 8-Pole	53.03.0166 53.03.0166 53.03.0166	XIC2 XIC5 XIC6				
	IC Socket IC Socket IC Socket	8-Pole 16-Pole 8-Pole	53.03.0166 53.03.0168 53.03.0166	XIC 8 XIC 8 XIC 9				
	IC Socket IC Socket IC Socket	8-Pole 20-Pole 16-Pole	53.03.0166 53.03.0165 53.03.0168	XIC • • 10 XIC • • 11 XIC • • 12				
	IC Socket IC Socket IC Socket	8-Pole 8-Pole 8-Pole	53.03.0166 53.03.0166 53.03.0166	XIC 13 XIC 14 XIC 15				
	IC Socket IC Socket IC Socket IC Socket	16-Pole 16-Pole 16-Pole 8-Pole	53.03.0168 53.03.0168 53.03.0168 53.03.0166	XIC16 XIC17 XIC18 XIC19				
	IC Socket IC Socket IC Socket	8-Pole 8-Pole 8-Pole	53.03.0166 53.03.0166 53.03.0166	XIC20 XIC21 XIC22				
	IC Socket IC Socket IC Socket IC Socket IC Socket	2D-Polo 8-Pole 8-Pole 16-Pole 8-Pole	53.03.0165 53.03.0166 53.03.0166 53.03.0168 53.03.0166	XIC23 XIC24 XIC25 XIC26 XIC27				
	B = Bolvestor	alutia 255	etter S/N ratio					
	= Silicon Mot = Motorola	Film SI	EL = Electr len MF = Metal DI = Analog Devi		PP =			
	Ra = Raytheon St = Studer	miconductors	S = National Se ig = Signetics	N S				
1.727.423.00 PAGE 15	ECTRONICS BOARD 2/2	AUDIO EL	(01) 87/04/28 01) 87/04/28 GP					

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- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

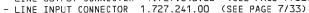




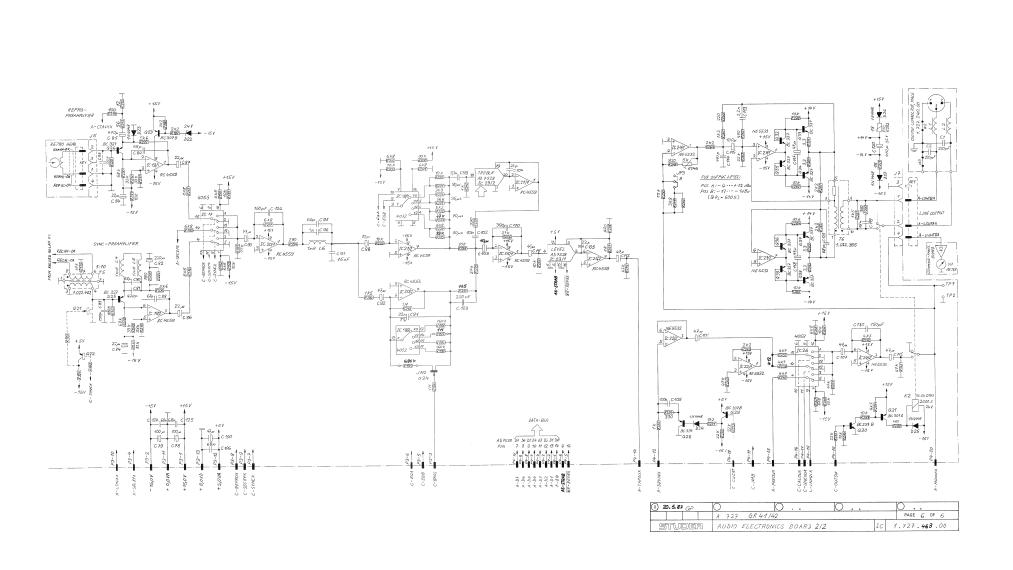
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7/82

AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

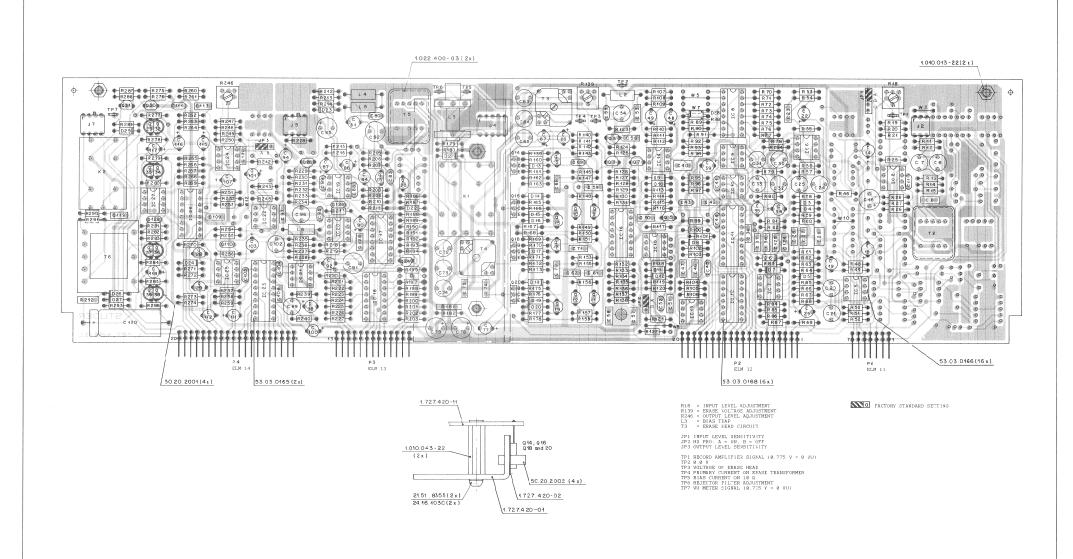








AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.00 GRP41/42



STUDER



AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.00 GRP41/42

) ELEC	TRONTO	3 (2-	2 WITH CHANNEL SELECT	DRS ONLY) 1.727.463.00 GRP41/42	100		
P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	INO. POS.NO. PART NC. VALUE SPECIFICATIONS / EQUIVALE	IT MANUF.	IND. PDS-NC. PART NO. VALJE SPECIFICATIONS / EQUIVALENT MANUF. IND.	POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
C 6 C 8 C 11	59.05.1681 19.05.1681 59.06.0103 59.34.4151	680 pF 680 pF 10 nF 150 pF	11 50V PP 11 50V PP 101 50V PETP 101 50V Ger	C128 59.34.46.00 68 pF 103, 50V Cer C129 59.05.02.24 220 nF 103, 50V EETP C130 59.34.4151 150 pF 103, 50V Cer		020 50-03-0510 B0136-16 PAP 021 not used	### 125   27-11-210   10   10   10   10   10   10   10
C 16 C 18 C 19	59-22-3470 59-22-3470 59-22-3470 59-22-3470 59-22-3470 59-05-2102 59-05-2102 59-05-2102 59-05-2102 59-05-2102 59-06-0105 59-06-0105 59-06-0105 59-06-0173 59-06-0473	680 pf 680 pf 10 nf 150 pf 47 uf 220 uf 47 uf 1 nf 1 nf 10 uf 6-8 nf 1 nf 1 uf 47 nf 47 nf 47 nf 47 nf 47 nf 47 nf 1 nf 1 nf	11 3 00 PP 101 500 PC 102 500 PC 103 500 PC 104 500 PC 105 60 PC 1	03 50.04.0125 104448 50V 51 04 50.04.102 6.8 5% 0.4M Jener 05 50.04.1105 2.1 V 5% 0.4M Jener 05 50.04.1105 2.1 V 5% 0.4M Jener 07 50.04.0125 104448 50V 51 07 50.04.0125 104448 50V 51 08 50.04.105 2.1 V 5.04M Jener		u25 50.03.0625 BC327 PNP	1
C 21 C 22 C 23	59.05.2102 59.05.2102 59.22.6100 59.06.0582	1 nf 10 uf 6.8 nf	2-5t 5CV PP 2-5t 5CV PP -20t 35V EL 10t 5CV PETP 2-5t 5CV PP 2-5t 5CV PP			006 3003 0.02 BEZZZ 20 10 10 10 10 10 10 10 10 10 10 10 10 10	
C 25 C 26 C 27 C 28	59.05.2102 59.06.0105 59.06.0173	1 nF 1 uf 47 nF 47 nF	2.5% SCV PP 10% S0V PETP 10% S0V PETP 10% S0V PETP -20% 10% SCV PP 1% SCV PP 1% SCV PP	D12 50,04,0125 184448 50V 51 D13 50,04,0125 184448 50V 51 D14 50,04,0125 184448 50V 51 D15 50,04,0125 184448 50V 51 D15 50,04,0125 184448 50V 51 D17 50,04,0125 184448 50V 51 D17 50,04,0125 184448 50V 51		012 10.03.0316 05.337 matches with 033. MPA 033 50.03.0516 05.337 matches with 033. MPA 035 50.03.0635 05.337 matches with 034. MPA 055 50.03.0625 05.237 matches with 034. MPA 050 50.03.0625 05.237 matches with 034. MPA 050 50.03.0635 05.237 matches with 034. MPA	R138 57.11.4822 8.2 10hn 2%, 0.25%, MF R139 58.0.18103 10 10hn 10%, 0.5 %, PMG R140 57.11.4229 2.2 0hs 2%, 0.25%, MF R141 57.11.3301 300 0hn 2%, 0.25%, MF
C 30 C 31 C 32	59.05.1332 59.05.1332 59.05.2102	47 uf 3.3 nf 3.3 nf 1 nf	-20% 10V EL 1% 5CV PP 1% 5CV PP 2.5% 5CV PP	016 50-04-0125 184448 50V 51 017 50-04-0125 184448 50V 51 018 50-04-0125 184448 50V 51 019 50-04-0125 184448 50V 51		028 50.03.0629 SL327 matched with 0.39; MPV 029 50.03.0625 SL327 matched with 0.39; MPV 811 57.11.452 1.5 kDnm 22. 0.250 MF 811 57.11.452 1.5 kDnm 22. 0.250 MF	8145 57.11.4332 33.3 Unm 23.0 U-254, MF 8145 57.11.4333 3-3 Unm 23.0 U-254, MF 8147 37.11.4411 470 Unm 23.0 U-254, MF 8149 57.11.4233 22. Unm 23.0 U-254, MF 8149 57.11.4233 22. Unm 23.0 U-254, MF
C 35 C 35 C 36	59.05.2102 59.22.8179 59.22.8179 59.06.0173 59.06.0173	4.7 uf 4.7 uf 4.7 uf 47 nf	2.5% 5CV PP -20% 35V EL -20% 35V EL 10% 5CV PETP	020 50-04-0125 N4448 50V 51 021 50-04-0125 N4448 50V 51 022 50-04-1121 24-V 53 04-44 20nor 023 50-94-0125 N4448 50 11		R11 37.11.452 1.3 kThm 22. 0.25% 9F R12 37.11.452 1.5 kThm 23. 0.25% 9F R13 37.11.4032 1.5 kThm 23. 0.25% 9F R13 37.11.4032 1.6 kThm 23. 0.25% 9F R15 37.11.4032 1.6 kThm 22. 0.25% 9F R15 37.11.4032 1.6 kThm 105. 0.25% 9F R16 35.01.60.2 5 kThm 105. 0.25% 9F R20 37.11.4023 1.2 kThm 105. 0.25% 9F R20 37.11.4023 1.2 kThm 22. 0.25% 9F R20 37.11.4023 1.2 kThm 22. 0.25% 9F	R168 57.11.4223 22 tOhn 2% 0.25% MF R169 57.11.4220 22 Ohn 2% 0.25% MF R150 57.11.4220 22 tohn 2% 0.25% MF R150 57.11.4220 22 tohn 2% 0.25% MF R153 57.11.4320 33 tOhn 2% 0.25% MF
C 18 C 19 C 25 C 26 C 27 C 28 C 28	59.06.0583	4.7 uf 4.7 uf 47 nf 68 nf 47 uf 470 of 22 pf 22 nf 220 pf 220 pf 22 pf 22 pf 33 nf 100 nf	-201 33V LEF 101 5CV PETP 101 5CV PETP 101 5CV PETP 101 5CV PETP 101 5CV Cer 101 5CV Cer 101 5CV Cer 101 5CV PETP 101 5CV PETP 101 5CV PETP 101 5CV Cer 101 5CV Ce	010 30.04.0125 [Ne448 50V 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		R21 57-11-9222 2-2 KU1M 2%, U.25H, M-	R155 57.11.4471 470 Ohm 2%, 0.25% MF R150 77.11.4223 22 Ohm 2%, 0.25% MF R157 37.11.4220 22 Ohm 2%, 0.25% MF R157 37.11.4220 22 Ohm 2%, 0.25% MF R159 57.11.4470 47 Ohm 2%, 0.25% MF
C 42 C 43 C 44 C 45	59.06.5974 59.34.2220 59.06.0223 59.34.4221 59.34.2220 59.34.2220 59.34.2220 59.06.0104 59.22.3470	22 nf 220 pf 22 pf 22 pf	10% 50V PETP 5% 50V Cer 10% 50V Cer 10% 50V Cer	112 50.00.0105 N 9532 Dail Op. Amp. 113 50.09.0105 N 5532 Dail Op. Amp. 110 50.09.0107 R 4559 Dail Op. Amp. 117 50.09.0107 R 4559 Dail Op. Amp. 118 50.07.0024 M 14032 Dail Op. Amp. 118 50.07.0024 M 14032 Dail Op. Amp.	Ság Ság Ra Ra	R22 7.11.24.33 4.3 KD at 24 U.25* 59 FFF   R25 7.11.24.33 5.4 KD at 24 U.25* 59 FFF   R26 7.11.24.01 100 Dan 24 U.25* 69 FFF   R28 7.11.24.01 100 Dan 24 U.25* 69 FFF   R26 7.11.24.72 4.7 KD at 24 U.25* 69 FFF   R49 7.11.24.73 4.7 KD at 24 U.25* 69 FFF   R49 7.11.24.73 4.7 KD at 24 U.25* 69 FFF   R49 7.11.24.73 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.73 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.73 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.73 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.73 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 FFF   R40 7.11.24.74 4.7 KD at 25 U.25* 69 F	R109 5-11-14-40 22 01 25, U-29H HF R100 5-11-14-40 22 0hr 25, U-29H HF R102 5-11-14-47 24 0hr 27, U-29H HF R102 5-11-14-47 4-7 kDhr 27, U-29H HF R103 5-11-14-29 2.2 Uhr 27, U-29H HF
C 48	59-06-0104 59-22-3470 1-17/05/20 6F		10% 50V PEIP 10% 50V PETP -20% 10V EL .ECTRONICS BOARD 2/2 1.727.463.00 PAGE 1	11/ 50.070.010 Nt 4959 Dual UP-Amp 11	ка Мот Ra !7-463-00 РАGE 4	R50 57-11-3132 1-3 KOnm 2%, 0-25H, MF	R. 165 57.11.4470 47 0hw 2%, 0.25% MF R. 166 57.11.4472 4.7 kDhw 2%, 0.25% MF U D E R (00) 87/05/20 GP AUDI ELESTRUKICS BOARD 2/2 1.727.463.00 PAG
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P05-N0-	PART 40.		SPECIFICATIONS / EQUIVALENT MANUFA	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALE		P	POS.VO. PARI NO. VALUE SPECIFICATIONS / EQUIVALENT
C50 C51 C52 C53	59.22.3470 59.66.0104 59.66.0103 59.34.4151 59.06.0222	47 uf 100 nf 10 nF 150 pf 2-2 nf	-201 10V LEFP 101 SCV PEFP 24 S6V Cer 102 SCV PEFP 2 103 SCV Cer 104 SCV Cer 104 SCV PEFP 105 SCV PEFP 106 SCV PEFP 107 SCV PEFP 108 SCV PEFP 109 SCV PEFP 109 SCV PEFP	1010   20.09.0157   20.359   20.01   30.09.Amp.   20.00.01   30.00.01	ADT ADT Ra Ra NS NS NO T No T Ra Ra Ra	1	### 107 5711140910 151 0hr 23 0.2544 WF #### 108 5711140912 0hr 25 0hr 2
55 55 56	59.05.2102 59.34.4580 59.06.0572 59.06.0103	150 pf 2-2 nf 1 nf 68 pf 4-7 nf 10 nf 10 nf	2-52 50V PP 10% 5CV Cor 10% 5CV PETP 10% 5CV PETP 10% 5CV PETP 10% 5CV PETP	E15 30.09.0181 [L 335] Dat Op. Amp. [E15 30.09.0182 [L 11700 Dat of IA. Amp. [E15 30.09.0182 [L 11700 Dat of IA. Amp. [E18 30.09.0182 [L 14700 Dat of IA. Amp. [E18 30.09.0187 [L 14952 [L 14700 Dat of IA. Amp. [E21 30.09.0187 [L 14952 [L 14952 [L 14700 Dat of IA. Amp. [E22 30.09.0187 [L 14952 [L 14700 Dat of IA. Amp. [E23 30.09.0187 [L 14952 [L 14700 Dat of IA. Amp. [E24 30.09.0187 [L 14952 [L 14700 Dat of IA. Amp. [E25 30.09.0187 [L 14952 [L 14700 Dat of IA. Amp. [E25 30.09.0187 [L 14952 [L 14700 Dat of IA. Amp. [E25 30.09.0187 [L 14950 Dat of IA. Amp.	NS NS Hot Mot	14	
58 59 60 61	59-06-0103 59-06-0103 59-06-0103	10 nF 10 nF		ICEV 50.09.0107 R 4559 Dual Up-Amp. IC20 50.09.0107 R 4559 Dual Up-Amp. IC21 50.09.0105 N 50.09.0105 Dual Up-Amp. IC22 50.09.0105 N 50.532 Dual Up-Amp. IC23 50.07.0026 AD 75281 Dual Up-Amp.	Ra Ra Sig ADI	R61 57.11.4152 1.5 kOnn 23 0.25% WF R62 57.11.4103 1.6 kOnn 23 0.25% WF R63 57.11.4105 156 kOnn 23 0.25% WF R64 57.11.4102 1.6 kOnn 24 0.25% WF	S170 97:11-422 v. IDhe 22: 0.259 HF K177 97:11-400 80 BD Hr 22: 0.259 HF K178 97:11-402 0-8 BDH 22: 0.259 HF K180 97:11-402 0-8 BDH 23: 0.259 HF K180 97:11-410 10 BH 23: 0.259 HF K181 97:49-0.209 5-0 DH 23: 0.259 HF K181 97:49-0.209 5-0 DH 23: 0.259 HF
63 69 65	59-06-0103 59-34-9101 59-05-2332 59-05-2332 59-05-2152 59-22-6220 59-22-6220 59-22-6220 59-24-0173 59-34-0179	3.3 nf 3.3 nf 1.5 nf 22 uf	not used 10t 5CV PEFP 10t 5CV PEP 2.5t 16CV PP 2.5t 16CV PP 2.5t 16CV PP 2.5t 16CV PP 1.0t 3V EL 1.0t 5CV PEP	IC24 50.09.0105 NE 5532 Dual (D. Amp. IC25 50.09.0107 RC 4559 Dual (D. Amp. IC26 50.07.00.5 HE 14051 CAMS Analog Switch IC27 50.09.0105 NE 5532 Dual (D. Amp.	Sig Ra Mot Sig	855 37:11-4333 33 KORN 2% 0.25% MF  856 37:11-472 4.1 KORN 2% 0.25% MF  856 37:11-472 4.1 KORN 2% 0.25% MF  856 37:11-472 32 KORN 2% 0.25% MF  856 37:11-472 32 KORN 2% 0.25% MF  856 37:11-473 1.1 KORN 2% 0.25% MF  857 37:11-473 1.1 KORN 2% 0.25% MF  858 37:11-4849 2% KORN 2% 0.25% MF	R 82 57.11.4569 5.6 Ohn 2%, 0.25% MF R 84
C 68 C 69 C 70	59-22-6220 59-C6-0473 59-34-0479 59-06-0473 59-34-0479	10 nF 100 pF 3-3 nF 3-3 nF 1-5 nF 22 uF 47 nF 4-7 pF 47 nF 4-7 pF 470 pF 1 nF	10% SCV PETP	J 2 54.01.07.49 3 3-Pole CLS Socket Strip J 4 54.01.03.03 5-Pole CLS Socket Strip J 5 94.01.03.04 4-Pole CLS Socket Strip J 7 94.01.03.04 4-Pole CLS Socket Strip	AMP AMP AMP AMP	R10 37-11-4002 G-E KOhm 25- 0-25'Y WF R11 00 Used R12 37-11-402 B-2 KOhm 25- 0-25'K MF R22 47-11-4224 B-2 KOhm 25- 0-25'K MF	### 1
72 73 74	59.05.2171 59.05.1102 59.05.1581	470 pf 1 nf 680 pf 220 nf	2-5% 636V PP 1% 636V PP 1% 636V PP 10% 50V PETP	JP 1 54-01-0021 Bridge JP 2 54-01-0021 Bridge JP 3 54-01-0021 Bridge		### 1	
C	59.06.0224 59.06.0224 59.22.6220 59.22.5101 59.22.5101 59.34.4580 59.05.2471 59.22.2221 59.34.4151	220 nf 22 uf 100 uf 100 uf	10% 5CV PETP -20% 35V EL -20% 25V EL -20% 25V EL 10% 5CV Cer 2-5% 5CV PP	K1 56.04.0144 400 Relay, 24V, 1280 Chm K2 56.04.0143 200 Relay, 24V, 2080 Chm		8	Section   Sect
84		1 nf 680 pf 220 nf 220 nf 220 nf 100 uf 100 uf 100 uf 100 uf 100 uf 100 pf 220 uf 150 pf 22 uf 470 uf	-20% 6-3V EL 10% 50V Cer -20% 25V EL	L2 62:01:0128 lmH L3 1:177:231:00 2.4m L5 02:01:0128 lmH L5 02:01:0128 lmH L5 02:01:0128 lmH	St	## 12 17:11:475 47 KOW 2% 0.25% HE  ## 13 17:11:475 47 KOW 2% 0.25% HE  ## 14 17:11:475 47 KOW 2% 0.25% HE  ## 15 17:11:402 1 KOW 2% 0.25% HE  ## 15 17:11:402 1 KOW 2% 0.25% HE  ## 15 17:11:402 1 KOW 2% 0.25% HE	### 1.00 Chm
C85 ) ER (00;	59.22.2471 67/05/20 GP	470 UF AUDIO EL	-20% 6.3V EL .ECTRONICS BOARD 2/2 1.727.463.00 PAGE 2		27-+63-00 PAGE 5		######################################
05 • NO •	PART ND.	VALUE	SPECIFICATIONS / EQUIVALENT PANUF.	ING. #33.NG. PART NJ. VALUE SPECIFICATIONS / EQUINAL	NY MANUF-		FOS-NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT
**************************************	59+22+5220 59+22+5220 59+14+4680 59+14+4680	22 uF 22 uF 68 pF 68 pF	-2C\$ 25V EL -2C\$ 25V EL 1C\$ 50V Cer 1C\$ 50V Cer -2C\$ 1DV EL 33 50V PP -2C\$ 1DV EL	AP		R(8) 37.11.4(3) 10 KDnn 2% 0.2294 FF  8(9) 37.11.4(3) 10 KDnn 2% 0.2294 FF  8(0) 37.11.4(3) 10 KDnn 2% 0.2294 FF  8(0) 37.11.4(3) 10 KDnn 2% 0.2294 FF  8(1) 37.11.752 7.3 KDnn 2% 0.2294 FF  8(3) 37.11.752 7.3 KDnn 2% 0.2294 FF  8(3) 37.11.3752 7.3 KDnn 2% 0.2294 FF  8(4) 37.11.3752 7.3 KDnn 2% 0.2294 FF  8(5) 37.11.3752 7.3 KDnn 2% 0.2294 FF  8(6) 37.11.3752 7.3 KDnn 2% 0.2294 FF  8(7) 37.11.3752 7.3 KDnn 2% 0.2294 FF  8(7) 37.11.3752 7.3 KDnn 2% 0.2294 FF	5205 57.11.4181 180 Ohn 2% 0.25% MF 5206 57.11.4582 506 Kbhn 2% 0.25% MF 5207 57.11.4164 100 Kbhn 2% 0.45% MF 6208 57.11.4613 68 Kbhn 2% 0.45% MF
**************************************	59.22.3470 59.05.1223 59.22.3470 59.22.5220	68 pF 68 pF 47 uF 22 nF 47 uF		AP 21.20.0355 2 pcs Screw M3.98 AP 24.10.1030 2 pcc Screw M3.98 AP 24.10.1030 2 pcc Masher 221192 AP 1 pcs Masher 221192 AP 1 pcs Mastsink AP 9 1.727.420.12 1 pcs Mastsink	St. St.	8 197    37-11-4692	1205
**** 95 **** 97 *** 98	59.05.2102 59.05.2102 59.06.0153 59.22.6100	22 uF 68 pF 1 nF 15 nF 10 uF	not used -20% 25W EL 10% 53W Cer 2-3% 53W PETP -20% 35W PETP -20% 35W EL	## 35-01-0020 4 pc: Contact Fin JP1 ## 35-01-0020 4 pc: Contact Fin JP1 ## 35-01-0020 4 pc: Contact Fin JP1 ## 35-01-0020 5 pc: Contact Fin JP2 ## 35-01-0020 5 pc: First Fin JP2 ## 35-01-0020 5 pc: Screw ## 38-9 ## 35-01-0020 5 pc: Screw ## 38-	St. St. St.	\$\cdot \cdot	5-11-4682 6-8 kOhn 27-0-25W-MF
100 101 102	59.05.2332 59.22.3470 59.22.3470 59.05.2103	10 UF 3.3 nF 47 UF 47 UF 10 nF 10 UF 22 pF 22 pF 48 nF 47 UF 190 nF 390 pF 47 UF	2.5% 50V PF -20% 10V EL -20% 10V EL 2.5% 50V PF -20% 50V PF		)	R 101 57-11-4010 1. KUMB 24-0-259* WF R 102 57-11-5333 34-000 25-0-9-F R 104 57-11-5332 34-000 25-0-9-F R 104 57-11-4012 30 0mm 23-0-259* MF R 105 57-11-4012 30 0mm 23-0-259* MF	1219 5.1.1.4152 1.5 kDhn 22. 0.259. MF 1220 57.1.1.4103 10 kDhn 22. 0.259. MF 1221 5222 57.1.1.4022 8.2 kDhn 22. 0.259. MF
105 105 106	59-34-2220 59-34-2220 59-06-0683 59-22-3470	22 pF 22 pF 68 nF 47 uF	102 53V Cer 102 53V Cer 102 53V PETP -203 13V EL	f2 >4.01.0261 20-Pole CIS fin Strip f3 \$4.01.0273 13-Pole CIS fin Strip f4 54.01.0251 20-Pole CIS fin Strip		R106 57-11-410-4 106 KUhm 22 226 0-229 MF R107 57-11-402 8-12 KUhm 22 0-25 KUhm 22 0-229 MF R108 57-11-4182 1-12 KUhm 22 0-229 MF R110 57-11-4062 5-2 KUhm 22 0-229 MF R110 57-11-4062 5-2 KUhm 22 0-229 MF	6223 57.11.49473 47 KOhn 2% 0.25% NF 6224 57.11.49482 6.8 KOhn 2% 0.25% MF 6225 57.11.4393 39 KOhn 2% 0.45% MF 6226 57.11.4332 3.9 KOhn 2% 0.45% MF
C104 C105 C106 C107 C109 C111 C112 C113 C114	59.22.3470 59.95.2103 59.95.2103 59.32.6100 59.34.2220 59.34.2220 59.36.0683 59.22.3470 59.06.0104 59.34.3391 59.22.3470 59.06.0222 69.14.671	100 nF 390 pF 47 uF 47 uF	-ccc 25V EL 10.1 25V FEF 10.1 2	05 50.03.0515 8C3078 8C5578 8C5608 PNF 06 50.03.0300 J112 07 50.03.0436 8C2378 8C5478 8C5508 NPF 06 50.03.0436 8C3378 8C5578 8C5608 PNF 06 50.03.0436 8C2378 8C5578 8C5608 PNF	Mot	Section   Sect	1 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -
C1:3 C1:4 C1:5 C1:6 C1:7	59.06.0222 59.34.5971 59.22.3470 59.22.3470 59.22.3470 59.22.3470 59.06.0153 59.25.5971	2,2 nF 410 pF 47 uF 100 uF 47 uF	104 53V PEIP 104 53V Cer -203 13V EL -204 13V EL -205 13V EL	30-30-30-30-30-30-30-30-30-30-30-30-30-3		6115 37.11.4223 22 80m 23 0.259. WF 8116 37.11.4223 22 80m 23 0.259. WF 8117 37.11.4223 22 80m 23 0.259. WF 8118 37.11.4223 22 80m 23 0.259. WF 8118 37.11.4223 22 80m 23 0.259. WF	5232 57.11.4313 33.10nn 22.0.25W. MF 8233 97.11.4013 10.10nn 22.0.25W. MF 8234 57.11.4213 270 Obn 22.0.25W. MF 8235 57.11.4213 27 KDn 22.0.25W. MF
C118 C119 C120 C124		47 uF 47 uF 47 uF 15 nF 470 uF 68 nF 68 nF 150 pF	20% 10V EL 10% 50V PETP 20% 35V EL 10% 50V PETP	415 50-03-0436 BC237B RC547B- 9C550B NPN 416 50-03-0510 B0136-16 PNF		8 - 155   37   1   391   390   Can   2% 0   0.25%   4F   8 - 150   37   1   391   390   Can   2% 0   0.25%   4F   8 - 150   37   1   391   392   10   10   10   8 - 150   37   1   392   10   10   10   8 - 150   37   1   392   10   10   8 - 151   37   1   392   10   10   8 - 151   37   1   392   10   10   8 - 151   37   1   392   10   10   8 - 151   37   1   392   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   22   10   10   8 - 151   37   1   392   20   10   10   8 - 151   37   1   392   20   10   10   8 - 151   37   1   392   20   10   10   8 - 151   37   1   392   20   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   1   392   10   10   10   8 - 151   37   10   10   10   10   8 - 151   37   10   10   10   10   8 - 151   37   10   10   10   10   8 - 151   37   10   10   10   10   8 - 151   37   10   10   10   10   8 - 151   37   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   37   10   10   10   10   10   8 - 151   10   10   10   10   10   10   10	8240 57-11-4102 1 rOba 22-0-25W-ME
C 125 C 126 D E R (CO	59.06.0683 59.34.4151 ) 87/05/20 GP		16% 53V PETP 16% 53V PETP 16% 53V Cer LECTRONICS BOARD 2/2 1.721-463-00 PAGE		27-463-00 PAGE 6		U D E R   100   87/05/20 GP AUSTO ELECTRONICS SDARD 2/2 1.727-463-00 PA

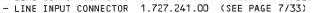


# AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.00 GRP41/42

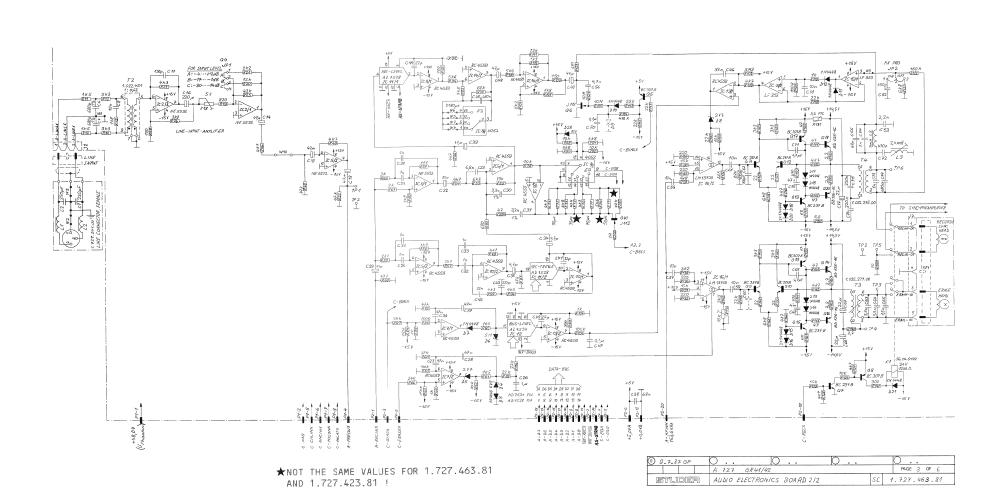
1	ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R 243 R 245 R 246 R 247 R 249 R 250 R 251 R 251	57-11-4473 57-11-4222 58-01-8502 57-11-4821 57-11-4392 57-11-4473 57-11-4473	47 kOhm 2•2 kOhm 5 kOhm 820 Ohm 3•9 kOhm 15 kOhm 47 kOhm 4-7 kOhm	2%, 0.25%, MF 2%, 0.25%, MF 10%, 0.5 %, PMO 2%, 0.25%, MF 2%, 0.25%, MF not used 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	R 253 R 255 R 255 R 256 R 257 R 259 R 259 R 261	57-11-4472 57-11-4331 57-11-4102 57-11-4273 57-11-4102 57-11-4103 57-11-4123 57-11-4121	4.7 kOhm 330 Ohm 1 kOhm 27 kOhm 1 kOhm 470 Ohm 10 kOhm 220 Ohm	2%, 0.25% MF	
	R 262 R 264 R 264 R 266 R 267 R 269 R 271 R 271 R 272	57.11.4471 57.11.4223 57.11.4173 57.11.4173 57.11.4682 57.11.4682 57.11.4103 57.11.4172 57.11.4122 57.11.4123 57.11.4223	470 Ohm 22 kOhm 2-2 kOhm 47 kOhm 47 kOhm 6-8 kOhm 6-8 kOhm 10 kOhm 1-2 kOhm 22 kOhm 22 kOhm	2%, 0.25% MF	
	R 274 R 275 R 276 R 277 R 278 R 279 R 280	57-11-4473 57-11-4223 57-11-4103 57-11-4339 57-11-4103 57-11-4103	47 k0hm 22 k0hm 10 k0hm 3.3 Ohm 10 k0hm 10 k0hm 3.3 Ohm	2%, 0.25%, MF	PAGE 13
	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	R 281 R 282 R 283 R 284 R 285 R 286 R 287 R 288 R 298 R 290 R 291 R 292 R 292 R 293 R 294	57.11.4222 57.11.4329 57.11.4103 57.11.4103 57.11.4103 57.11.4329 57.11.4471 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.44152 57.92.1151	2+2 kOhm 2-2 kOhm 1-2 kOhm 10 kOhm 10 kOhm 10 kOhm 1-7 kOhm 1-7 kOhm 3-3 Ohm 1-5 kOhm 1-5 kOhm 1-5 kOhm 1-5 kOhm 1-5 kOhm 1-7 kOhm 1-7 Ohm 1-7 Ohm 1-7 Ohm	2% 0.25% MF	
	T • • • • 2 T • • • • 3 T • • • • 4 T • • • • 5 T • • • • 6 TP • • • • 1 TP • • • • 2	1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00 1.022.402.00 1.022.355.00 54.02.0320 54.02.0320	1:0.62	Line Input Trafo Erase Trafo Bias Trafo Sync Trafo Line Output Trafo Plug 2.8°0.8 Plug 2.8°0.8	St St St St St AMP
	TP 2 TP 4 TP 5 TP 7 W 3 W 4 W 5 H 6	\$4.02.0320 \$4.02.0320 \$4.02.0320 \$4.02.0320 \$4.02.0320 \$4.01.0106 \$4.01.0106 \$4.01.0106 \$4.01.0106		Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Plug 2.800.8 Wire Bridge not used Wire Bridge not used Wire Bridge Wire Bridge Wire Bridge Wire Bridge	AMP AMP AMP AMP AMP
	W10 W12 STUDER (C	64.01.0106 64.01.0106 00) 87/05/20 GP	AUDIO EL	Wire Bridge Wire Bridge ECTRUNICS BOARD 2/2 1.727.463.00	PAGE 14
	XIC2	PART NO. 53.03.0166	8-Pole	IC Socket	MANUF.
	XIC5 XIC6 XIC7 XIC8 XIC9 XIC10 XIC11 XIC12 XIC12 XIC13 XIC14 XIC15 XIC16 XIC17	53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0165 53.03.0165 53.03.0165 53.03.0165 53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 8-Pole 16-Pole 8-Pole 20-Pole 10-Pole 8-Pole 8-Pole 16-Pole 16-Pole	IC Socket	
	XIC 18 XIC 19 XIC 20 XIC 21 XIC 22 XIC 23 XIC 24 XIC 25 XIC 26 XIC 27	53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0165 53.03.0166 53.03.0166 53.03.0166 53.03.0166	B-Pole 8-Pole 8-Pole 8-Pole 20-Pole 8-Pole 16-Pole 8-Pole	IC Socket	
	MANUFACTURER: AI	EL = Electr len MF = Metal DI = Analog Devi S = National Se ig = Signetics	Film SI	P = Polyester = Silicon Mot = Motorola Ra = Raytheon St = Studer	
	STUDER (	00) 87/05/20 GP	AUDIO EL	ECTRONICS BOARD 2/2 1.727.463.0	D PAGE 15

AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42 AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.81 GRP41/42

- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)



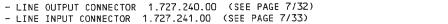




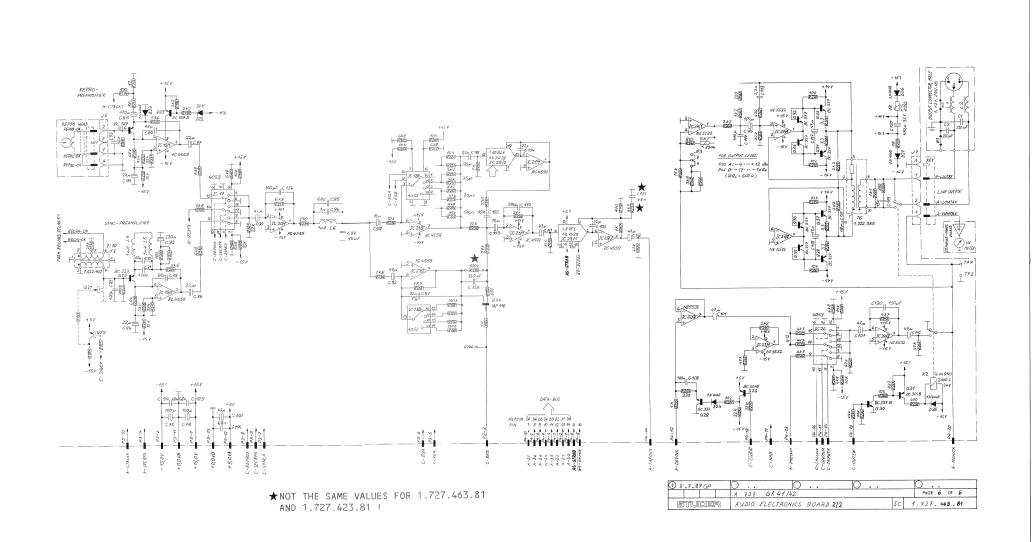
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AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42 AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.81 GRP41/42

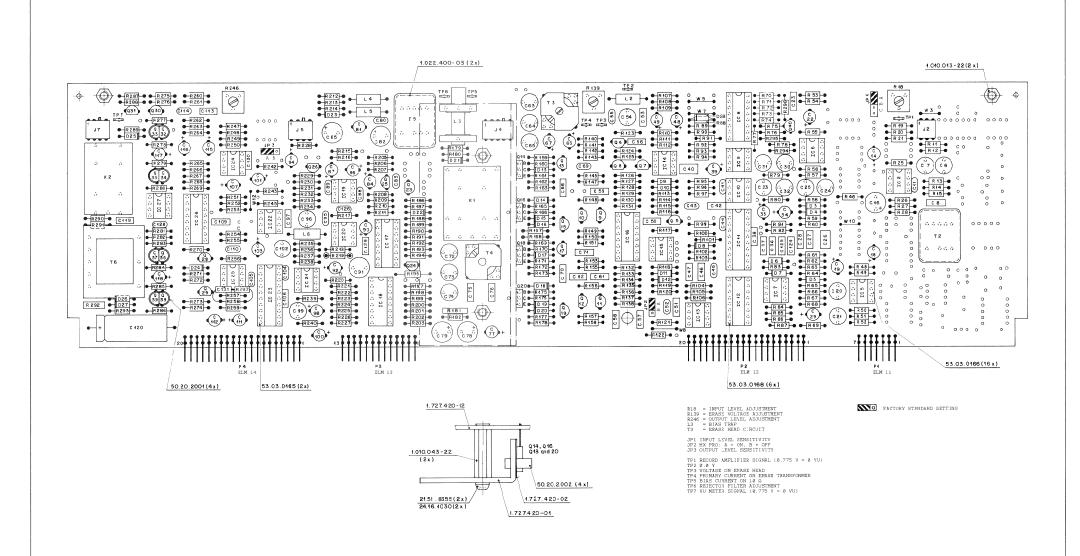














AUDIO ELECTRONICS (2	-2 WITH CHANNEL SELECTOR	RS ONLY) 1.727.4	63.81 GRP41/42										1	
INO- POS-NO- PART NO- YALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. PDS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	MANUF .	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
C	11 500 PP 11 10 PP 10 10 500 PP 10 10 500 PP 10 10 10 500 PP 10 10 10 10 PP 10 PP 10 10 PP 10	0	6 p F	Sig Sig Sig Ro Pot Bl PAGE 4	0	57.11.4392 57.11.4182 58.01.8502 57.11.4823 57.11.4223 57.11.4222 57.11.4923 57.11.4933 57.11.4973 57.11.4472 57.11.4472 57.11.4472	BD136-16 BC1373 WP146 BC327 BC1377 BC	not used not	Mot Mot	R - 124 R - 125 R - 128 R - 128 R - 128 R - 128 R - 130 R - 13		390 Ohe 3-3 kOhr 3-3 kOhr 3-3 kOhr 3-3 kOhr 470 Ohr 22 kOhr 22 kOhr 22 Ohr 23 Ohr 470 Ohr 22 Ohr 22 Ohr 470 Ohr 22 Ohr 22 Ohr 22 Ohr 47 Ohr	53. 0.25% MF  37. 0.25% MF	1 PAGE 10
IND. POS-NO. PART NO. YALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS-NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	HANDF.	IND. POS.NC.	PART NO.	VALJE		HLNUF.	1ND. PDS.40.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANJF.
C	-0.1 100 EL 101 500 FITE 100 50	12  10   50.09.0107   12.	E 5599 Deal On-Amp.  2599 Deal On-Amp.  2590 Deal O	Ro 104 A011 A011 A011 A011 A011 A011 A011	8 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1	>7-11-4562 37-11-4403 57-11-4681 37-11-4681 37-11-4673 >7-11-4562 >7-11-4152 >7-11-4104	1.3 kOrn 4.7 kOrn 4.7 kOrn 4.7 kOrn 4.8 kOrn 4.8 kOrn 4.8 kOrn 4.8 kOrn 4.8 kOrn 4.8 kOrn 4.9 kOrn 4.9 kOrn 4.1	225 0.254 W 230 0.254 W 240 0.254 W 250 0.	GC 8	R	57.11.4222 57.11.4222 57.11.4103 57.11.4602 57.11.4602 57.11.4602 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103	4.7 bither 4.7 bither 4.8 chies 4.8 chies 4.7 chies 4.8 chies 6.8	13. G. 2544 MF  (23. G. 2544 MF  (24. G. 2544 MF  (25. G.	. P45E 11
INO. POS.NO. PART 40. VALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NC.	PART NO.	VALJE		MA NUF.	ENO. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
CB) 97-22-5120 22 08 CB) 97-22-5120 22 08 CB) 97-22-5120 22 08 CB) 97-34-4889 68 06 CB) 97-34-4889 68 06 CB) 97-34-4889 68 06 CB) 97-34-23-170 47 07 CB) 97-22-3170 47 07 CB) 97-34-22-3170 47 07 CB) 97-34-32-3170 47 07 CB) 97-32-3170 10 07 CB) 97-32-3170 11 07 CB) 97-33-4131 11 07 CB) 97-3	-201 29V 6L -201 29V 6L 1015 50V 6L 1016 50V 6L 1017 50V 6L 1018 5	##	A POR CONTEXT PIN	SE S	100 mm m	97-11-2941 37-11-4040	24 kOnn 15 kOnn 16 kOn	225 0.255 W 23 0.255 W 24 0.255 W 25 0.255 W	SE 9	8 - 100	57-11-4812 57-11-4613 57-11-4613 57-11-4612 57-11-4313 57-11-4313 57-11-4513 57-11-4513 57-11-4513 57-11-4513 57-11-4103 57-11-4103 57-11-4113 57-11-4113 57-11-4113 57-11-4113 57-11-4113 57-11-4113 57-11-4113	100 Ohe 5.00 (Ohe 5.00 (Ohe 6.00 (Oh	not used	1 PAGE 12



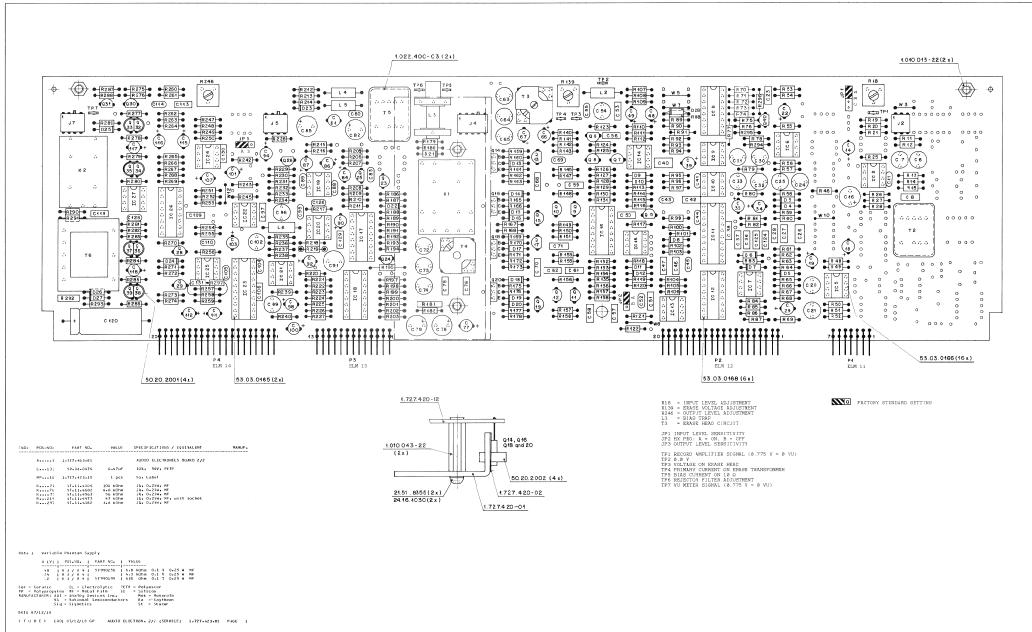
# AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.463.81 GRP41/42

ND. POS.NO.	PART NO. 	VALUE 	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE
R • • • 243 R • • • 245 R • • • 246	57.11.4473 57.11.4222 58.01.8502	47 kOhm 2•2 kOhm 5 kOhm	2%, 0.25W+ MF 2%, 0.25W+ MF 10%, 0.5 W+ PMG		Cer = Ceramic EL = Electrolytic PETP = Polyester PP = Polypropylen HF = Metal Film SI = Silicon
R • • • 247 R • • • 248 R • • • 249	57•11•4821 57•11•4392	820 Ohm 3•9 kOhm	2%, 0.25W, MF 2%, 0.25W, MF not used		MANUFACTURER: ADI = Analog Devices Inc. Mot = Motorola NS = National Semiconductors Ra = Raytheon Sig = Signetics St = Studer
R * * * 250 R * * * 251 R * * * 252	57.11.4153 57.11.4473 57.11.4472	15 kOhm 47 kOhm 4•7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R253 R254 R255	57.11.4472 57.11.4331 57.11.4102	4.7 kBhm 330 Dhm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R • • • 256 R • • • 257 R • • • 258	57-11-4273 57-11-4102 57-11-4471	27 kOhm 1 kOhm 470 Ohm	2%, 0-25W+ MF 2%, 0-25W+ MF 2%, 0-25W+ MF		
R259 R260 R261	57.11.4103 57.11.4221 57.11.4122	10 kOhm 220 Ohm 1.2 kOhm	2%, 0-25W, MF 2%, 0-25W+ MF 2%, 0-25W, MF		
R • • • 262 R • • • 263 R • • • 264	57.11.4471 57.11.4223 57.11.4222	470 Ohm 22 kOhm 2•2 kOhm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF		
R • • • 265 R • • • 266 R • • • 267	57.11.4473 57.11.4103 57.11.4682	47 kOhm 10 kOhm 6.8 kOhm	2%, 0.25%; MF 2%, 0.25%; MF 2%, 0.25%; MF 2%, 0.25%; MF		
R • • • 268 R • • • 269 R • • • 270 R • • • 271	57-11-4682 57-11-4103 57-11-4472 57-11-4122	6.8 kOhm 10 kOhm 4.7 kOhm 1.2 kOhm	2% 0 0 25 W MF 2% 0 0 25 W MF 2% 0 0 25 W MF		
R 272 R 273 R 274	57-11-4223 57-11-4223 57-11-4473	22 kOhm 22 kOhm 47 kOhm	2%+ 0+25W+ MF 2%+ 0+25W+ MF 2%+ 0+25W+ MF		
R • • • 275 R • • • 276 R • • • 277	57.11.4223 57.11.4103 57.11.4339	22 kOhm 10 kOhm 3•3 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
R 278 R 279	57-11-4103 57-11-4103	10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		ORIG 87/07/09
TUDER (	00) 87/07/09 GP	AUDIO EL	ECTRONICS BOARD 2/2 1.727.463.8	1 PAGE 13	S T U D E R (00) 87/07/09 GP AUDIO ELECTRONICS BOARD 2/2 1+727+463+81 PAGE !
ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	
R280 R281 R282 R283	57•11•4339 57•11•4222 57•11•4222 57•11•4339	3.3 Ohm Z.Z KOhm 2.2 KOhm 3.3 Ohm	2%, 0.25W+ MF 2%, 0.25W+ MF 2%+ 0.25W+ MF 2%, 0.25W+ MF		
R • • • 283 R • • • 284 R • • • 285 R • • • 286	57-11-4339 57-11-4103 57-11-4103 57-11-4339	10 kOhm 10 kOhm 10 kOhm 3.3 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R 288 R 289	57-11-4472 57-11-4103 57-11-4471	4.7 kOhm 10 kOhm 470 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R290 R291 R292	57.11.4391 57.11.4152 57.92.1151	390 Ohm 1.5 kOhm 18 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 150mA, PTC		
R293 R294 K295	57.11.4180 57.11.4470 57.11.4223	18 Ohm 47 Ohm 22 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
R296 R297	57.11.4105 57.11.4472	1 MOhm 4.7 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
T 2 T 3 T 4 T 5 T 6	1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00 1.022.405.00	1:0.62	Line Input Trafo Erase Trafo Bias Trafo Sync Trafo Line Output Trafo	St St St St	
TP2 TP3	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP AMP	
TP4 TP5 TP6	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP AMP	
TP****7	54.02.0320		Plug 2.8¢0.8 Wire Bridge	АМР	
W W W6	64.01.0106		not used Wire Bridge not used		
TUDER	(00) 87/07/09 GP	AUDIO EL	ECTRONICS BUARD 2/2 1.727.463.8	31 PAGE 14	
NO. POS.NO.	64.01.0106	VALUE	SPECIFICATIONS / EQUIVALENT  Wire Bridge	MANUF.	
W8 W10 W12	64.01.0106 64.01.0106	8-Pole	Wire Bridge Wire Bridge Wire Bridge IC Socket		
XIC5 XIC6 XIC7	53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
XIC 9 XIC 9 XIC 10	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket		
XIC 11 XIC 12 XIC 13	53.03.0165 53.03.0168 53.03.0166	20-Pole 16-Pole 5-Pole	IC Socket IC Socket IC Socket		
XIC14 XIC15 XIC16	53.03.0166 53.03.0168	8-Pole 8-Pole 15-Pole	IC Socket IC Socket IC Socket		
XIC 17 XIC 18 XIC 19 XIC 20	53.03.0168 53.03.0166	16-Pole 16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket		
XIC20 XIC21 XIC22 XIC23	53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole 20-Pole	IC Socket IC Socket IC Socket IC Socket		
XIC 24 XIC 25 XIC 26	53.03.0166 53.03.0166	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket		
xIC27	53.03.0166	8-Pole	IC Socket		
TUDER	(00) 87/07/09 GP	AUDIO EL	_ECTRONICS BOARD 2/2 1.727.463.8	B1 PAGE 15	

STUDER A807 7/93

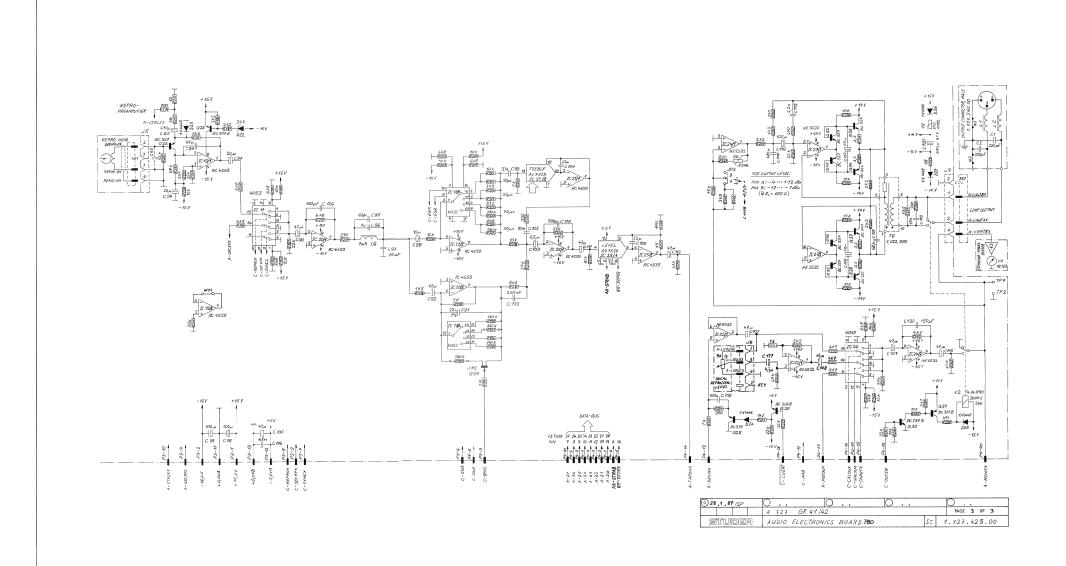
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AUDIO ELECTRONICS (2-2 WITH CHANNEL SELECTORS ONLY) 1.727.423.81 GRP41/42



AUDIO ELECTRONICS (PBO) 1.727.425.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

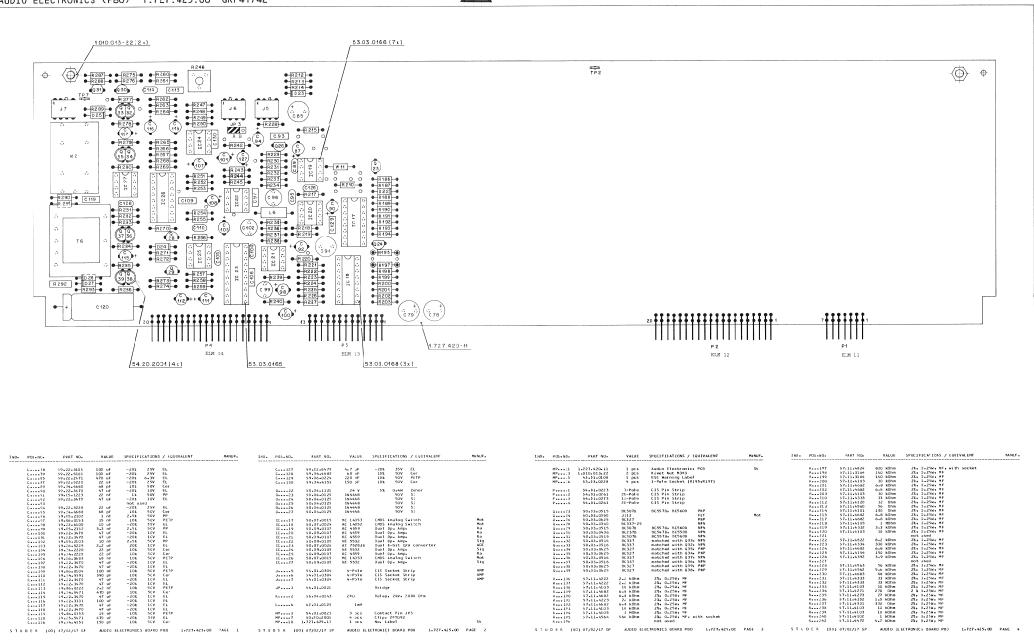






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7/97

# AUDIO ELECTRONICS (PBO) 1.727.425.00 GRP41/42

MANUF	I VALENT	SPECIFICATIONS / EQUI	VALUE	PART NO.	POS.NO.	IND.
		2%, 0.25W, MF 2%, 0.25W, MF	47 kOhm 1 kOhm	57.11.4473 57.11.4102	R243 R244	
		2%, 0.25W, MF 10%, 0.5 W, PMG 2%, 0.25W, MF	2•2 kOhm 5 kOhm 820 Ohm	57•11•4222 58•01•8502 57•11•4821	R 245 R 246 K 247	
		2%, 0.25W, MF not used	3.9 kOhm	57.11.4392	R • • • 248 R • • • 249	
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	15 KUNM 47 KONM	57.11.4153 57.11.4473	R250 R251	
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 4.7 kOhm 330 Ohm	57-11-4472 57-11-4472 57-11-4331	R • • • 252 R • • • 253 R • • • 254	
		2%, 0.25W, MF 2%, 0.25W, MF	1 kOhm 27 kOhm	57.11.4102 57.11.4273	R255 R256	
		2%, 0.25W, MF 2%, 0.25W, MF	1 kOhm 470 Ohm	57.11.4102 57.11.4471 57.11.4103	R 257	
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	10 k0hm 220 Ohm 1.2 k0hm	57-11-4103 57-11-4221 57-11-4122	R259 R260 R261	
		2%, 0.25W, MF 2%, 0.25W, MF	470 Ohm 22 kOhm	57•11•4471 57•11•4223	R262 R263	
		2%, 0.25W, MF 2%, 0.25W, MF	2.2 kOhm 47 kOhm 10 kOhm	57-11-4222 57-11-4473	R • • • 264 R • • • 265	
		2%, 0.25W, MF 2%, 0.25H, MF 2%, 0.25W, MF	6.8 kOhm 6.8 kOhm	57-11-4103 57-11-4682 57-11-4682	R266 R267 R268	
		2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 4•7 kUhm	57-11-4103 57-11-4472	R269 R270	
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	1.2 kOhm 22 kOhm	57.11.4122 57.11.4223	R271 R272	
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	22 kOhm 47 kOhm 22 kOhm	57.11.4223 57.11.4473 57.11.4223	R273 R274 R275	
		2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 3.3 Ohm	57.11.4103 57.11.4339	R276 R277	
		2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 10 kOhm	57.11.4103 57.11.4103	R278 R279	
PAGE 5	1.727.425.00	CTRONICS BOARD PBD	AUDIO ELE	00) 87/02/17 GP	D E R	. т и
MANUF	IVALENT	SPECIFICATIONS / EQU	VALUE 3.3 Ohm	PART NO. 57.11.4339		
		2%, 0.25W, MF 2%, 0.25W, MF	2.2 kOhm 2.2 kOhm	57.11.4222 57.11.4222	R280 R281 R282	
		2%, 0.25W+ MF 2%, 0.25W+ MF 2%, 0.25W+ MF	3.3 Ohm 10 kOhm	57.11.4339 57.11.4103	R 283	
		2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 3•3 Ohm 4•7 kOhm	57.11.4103 57.11.4339 57.11.4472	R 285	
		2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 470 Ohm	57.11.4472 57.11.4103 57.11.4471	R 287 R 288 R 289	
		2%, 0.25W, MF 2%, 0.25W, MF	390 Ohm 1.5 kOhm	57.11.4391 57.11.4152	R 290	
		150mA, PTC 2%, 0.25W, MF	18 Ohm 18 Ohm	57.92.1151 57.11.4180	R • • • 292 R • • • 293	
St		Line Output Trafo		1.022.355.00	T 6	
AMP AMP		Plug 2.8*0.8 Plug 2.8*0.8		54.02.0320 54.02.0320	TP 7	
		Wire Bridge		57.11.4000	W11	
		IC Socket IC Socket	16-Pole 16-Pole	53.03.0168 53.03.0168	XIC - 17	
		IC Socket IC Socket IC Socket	8-Pole 8-Pole 8-Pole	53.03.0166 53.03.0166 53.03.0166	XIC19 XIC20 XIC21	
		IC Socket IC Socket	8-Pole 20-Pole	53.03.0166 53.03.0165	XIC22 XIC23	
		IC Socket IC Socket IC Socket	8-Pole 8-Pole 16-Pole	53.03.0166 53.03.0166 53.03.0168	XIC - 24 XIC - 25 XIC - 26	
		IC Socket	8-Pole	53.03.0166	XIC 27	
PAGE	1.727.425.00	ECTRONICS BOARD PBO	AUDIO EL	00) 87/02/17 GP	DER	STU
MANU!	UIVALENT	SPECIFICATIONS / EQU	VALUE	PART NO.	POS.NO	IND.
		P = Polyester = Silicon		•		PP =
		Mot = Motorola		ADI = Analog Devi	ACTURER:	MANUE

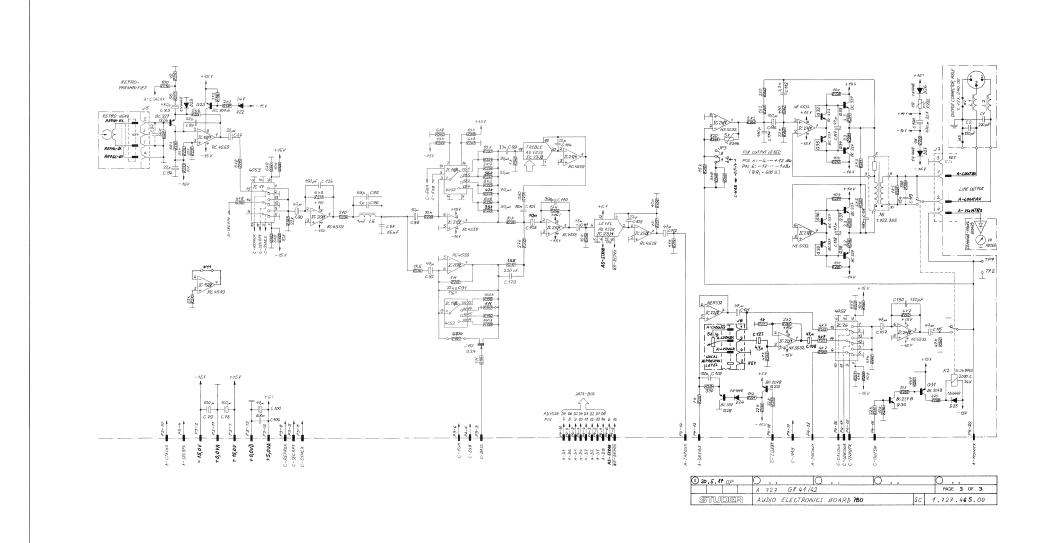
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S T U D E R (00) 87/02/17 GP AUDIO ELECTRONICS BOARD PBO 1.727.425.00 PAGE 7

AUDIO ELECTRONICS (PBO) 1.727.465.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

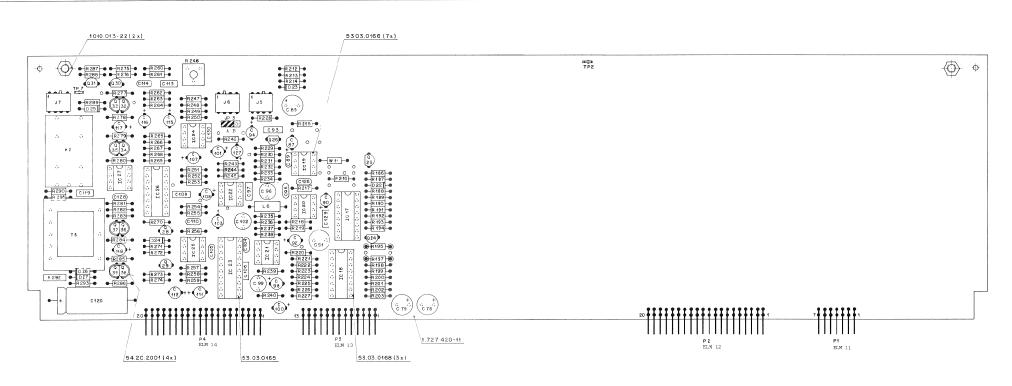
STUDER











IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUI		IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	140. POS.40.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
C 78	59-22-5101	160 uF	-2C% 25V EL		C127	59.22.8419	4.7 UF	-20% 35V EL		HF11	1.727.420.11	1 pcs	Audio Electronics PCB	St	R197	57-11-4105	1 AOhr	2%, 0.25W. MF, with socket	
	39.22.5101	100 UF	-20% 25V EL		6120	59+34+4040	68 pF	10% 50V Cer		MP13	1.010.013.22	2 pcs	Rivet Nut M3º3		R***198	57+11+3164	160 kOhs	2% 0 - 25N + MF	
Ç19	59-22-2471	470 UF	-20% 6.3V EL		C129	59.06.0224	220 nF	10% 50V PETP		MP15	43.01.0103	1 pcs	ESE Warning Label		R199	57-11-3164	160 kOh#	2%+ 0.25W+ MF	
E	59.22.5220	22 UF	-20% 25V EL		C130	59.34.4151	150 pF	10% 50V Cer		MPasalo	53.03.0223	4 pcs	1-Pole Socket (R195,R197)		R***200	57-11-4103	10 kOhm	2%, 0.25W, MF	
C 17	59.34.4680	68 DF	102 50V Cer			3743144272	250 pr	104 707 007			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				R201	57-11-4682	6.8 kOh#	2%, 0.25W, MF	
E	59.22.3470	47 UF	-20% 10V EL		0 22	50+04+1121	24 V	5% O.AN Jener		Personal	54.01.0223	7-Pole	CIS Pin Strin		R202	57.11.4682	6.8 kOhn	2% 0 - 25 M + MF	
C****90 C****91	59.05.1223	22 nF	12 50V PP		U 23	50-04-0125	1 N 4 4 4 8	50V \$1		P2	54.01.0261	20-Pole	CIS Pin Strip		R***203	57-11-4103	10 kOhn	2% + 0 • 25 M + MF	
	59.22.3470	47 UF	-20% 10V EL		029	50.04.0125	184448	50V 5I		P3	54.01.0273	13-Pple	CIS Pin Strip		R210	57.11.4333	33 kOhn	2% 0.25W MF	
C 92	37.62.3410	AT UF	not used		025	50.04.0125	184448	50V SI		Present	54.01.0261	20-Pole	CIS Pin Strip		R***212	57.11.4120	12 Ohr	2%, 0.25W, MF	
E ** * * 93	59.22.5220	22 uF	-20% 25V EL		0 26	50+04+0125	1N4+48	50V 31							R213	57-11-4560	56 Ohn	2%, 0.25W, MF	
C+++94	59.34.4680	68 pF	10% 50V Cer		027	50.04.0125	184448	50V SI		Q23	50.03.0515	EC 307B	BC5578+ BC560B PNP		R***214	57.11.4101	100 Ohn	2% + 0 - 25W + MF	
C 95	59-05-2102	1 oF	2.5% 50V PP		0	3000100103	******			924	50.03.0350	J112	FFT	Hot	R215	57.11.4642	6.8 kOhn	2%, 0.25W, MF	
C 96	59.06.0153	15 nF	10% SOV PETP		IC 17	50.07.0015	MC 14053	CMOS Analog Switch	Bot	926	50.03.0625	EC 3 27	PNP		R+++217	57+11+4682	6+8 kOhn	2% + 0 • 25 W + MF	
648	59.22.6100	10 UF	-20% 35V EL		IC 18	50.07.0024	MC 14052	CMDS Analog Switch	Mot	928	50.03.0340	EC337-25	NPN		R218	57.11.4105	1 NOhn	2%, 0.25W. MF	
C *** * 99	59.05.2332	3.3 nF	2.5% 50V PP		IC *** 1.9	50.09.0107	RC 4559	Qual Go. Amo.	80	029	50.03.0515	5C307B	BC5578+ 8C560B NPN		8219	57.11.4152	1.5 kOhn	2%, 0.25W, MF	1
C 100	59.22.3470	47 UF	-20% 10V EL		IC20	50.09.0107	RC 4559	Dual Op. Amp.	Ra .	930	50.03.0435	EC 2 37B	BC5478+ BC550B NPN		8***220	57.11.4103	10 kOhn	2%, 0.25W, MF	
C+++ 101	59.22.3470	47 UF	-20% 10V EL		10 * * * 21	50.09.0107	BC 4559	Oual Op. Amp.	8a	031	50.03.0515	8C307B	BC5578+ BC560B NPN		R221			not used	
C102	59.05.2103	10 nF	2.5% 50V PP		IC 22	50.09.0105	NE 5532	Ouel Up. Amp.	Sig	932	50.03.0515	EC337	matched with Q33. NPN		R***222	57.11.4822	8.2 kOhn	2%, 0.25W, MF	
C *** 102	59.22.6100	10 HF	-20% 35V EL		IC23	50.07.0026	AD 752BJN	Oual 8-bit D/A Converter	401	933	50.03.0515	EC 337	matched with Q32. NPN		R223	57.11.4413	47 kOhn	2% • 0 • 25W • MF	1
C104	59.34.2220	22 DF	10% 50V Cer		IL 24	50.09.0105	NE 5532	Dual Op. Amp.	Sig	934	50.03.0625	EC 327	matched with Q35. PNP		8***224	57.11.4642	6.8 kOhm	2%, 0.25W, MF	1
C105	59.34.2220	22 DF	102 50V Cer		IC * * * 25	50.09.0107	RC 4559	Dual Up. Amp.	Ba .	035	50.03.0625	EC 327	matched with 034+ PNP		R225	57+11+4393	39 kOhn	2% + 0 - 25W + MF	- 1
C106	59.06.0683	68 nF	10% 50V PETP		IL 26	50.07.00.5	MC 14053	CMOS Analog Switch	Mot	Q36	50.03.0515	EC 337	matched with Q37. NPN		R***226	57-11-4392	3.9 kOhn	2%, 0.25W, MF	1
C+++107	59-12-2470	47 UF	-20% 10V EL		1027	50.09.0105	NE 5532	Dual Op. Amp.	Sig	Q37	50.03.0515	BC 337	matched with Q36. NPN		R 227	57.11.4563	56 kOhn	2%, 0.25W, MF	i
C108	59.12.3470	47 UF	-20% 10V EL		10.000			out op my		938	50.03.0625	EC 327	matched with Q39. PNP		R228	57-11-4543	56 kOhn	2% • 0 • 25W • MF	
C109	29.06.C104	100 pF	LC% SOV PETP		J5	54.01.0304	4-201e	CIS Socket Strip	AMP	039	50.03.0625	EC 327	matched with Q38. PNP		R229	57.11.4562	5.6 kOhn	2%, 0.25W, MF	
6 110	59.34.5391	340 pF	10% 50V Cer		J	54.01.0304	4-201e	CIS Socket Strip	AMP						R230	57-11-4643	66 kOhn	2% + 0 • 25 w + MF	1
6111	59.22.3470	47 UF	-20% 19V EL		J 7	54.01.0304	4-201e	CIS Socket Strip	AMP	R 186	57-11-4222	2.2 kDhm	2% 0.25W MF		F231	57.11.4333	33 kOhn	2%, 0.25W, MF	
6112	59.22.3470	47 UF	-20% 10V EL		311111	3445146364		ers vocace serre		R 187		2.2 kJhm	2%, 0.25W, MF		8232	57-11-4313	33 k0hm	2%+ 0+25W+ ME	i
C 113	59.06.0222	2.2 nF	10% SOV PETP		JP • • • • 3	54.01.0021		Bridge		B186	57-11-4103	10 kOhm	2% 0.25W MF		R233	57.11.4103	10 kOhn	2%, 0.25W, MF	1
C+++114	39.34.5471	470 pF	10% 50V Cer							R 189	57-11-4682	6.8 kJhm	2%+ 0.25W+ MF		R234	57-11-4211	270 Ohn	2 % 0 • 25W • MF	
C115	59 - 22 - 3470	47 UF	-20% 10V EL		K 2	56.04.01.13	200	Relas, 24V, 2000 0hm		R 190	57-11-4682	6.8 kOhm	2% 0 - 25W - MF		8 235	57-11-4213	27 kOhn	2%, 0.25W, MF	
C116	>9.22.3101	100 UF	-20% 10V ÉL					,.		8191	57-11-4223	22 k3hm	2% 0 - 25H + MF		R236	57.11.4152	1.5 kOhm	2% 0 - 25W + MF	
C 117	59.22.3470	47 UF	-20% 10V EL		L6	62.01.0128	1 mH			8 192	57-11-4682	6.8 kJhm	23. 0.25W • MF		R***237	57-11-4311	330 Ohn	2% + 0 • 25W + MF	ı
C 118	59-22-3470	47 UF	-20% 10V EL							B 193	57-11-4103	10 k3hm	2% • 0+25W • MF		R 238	57.11.4103	10 kOhn	2%, 0.25W, MF	
C+++119	29.00.0153	15 OF	1C% SOV PETP		MP 3	54.01.0020	3 pcs	Contact Pin JP3		5194	57-11-4105	1 MOhm	2% 0 - 25H - MF		R239	57.11.4103	10 kOhn	2% + 0 • 25W + MF	1
C 120	59-25-5471	470 UF	-20% 35V EL		MP 7	50.20.2001	4 pcs	Clip, 2*T092		B 195	57-11-4684	680 k3hm	2% • 0 • 25W • MF • with socket		R***240	57.11.4102	1 kOhn	2% 0 • 25W • MF	1
C 126	59.34.4151	150 pF	102 50V Cer			1.727.465.10	1 pcs	Np. Label	St.	R 196			not used		H242	57.11.4412	4.7 kOhn	2% 0 - 25W - MF	l l
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2.50 pr	200 201 061				. per												- 1
STUDER (CO	37/05/20 GP	AUDIO EL	ECTRONICS BOARD PBC	1.727.465.00 PAGE 1	STUDER [0	01 87/05/20 GP	AUDIO EL	ECTRONICS BOARD PBD 1.727.465.	00 PAGE 2	STUDER (D	0) 87/05/20 SP	AUDIO ELE	ECTRONICS BOARD PBD 1.727.455.00	PAGE 3	STUDER ;0	0) 87/05/20 GP	AUDIO EL	ECTRONICS BOARS PB0 1.727.465.	OO PAGE 4



# AUDIO ELECTRONICS (PBO) 1.727.465.00 GRP41/42

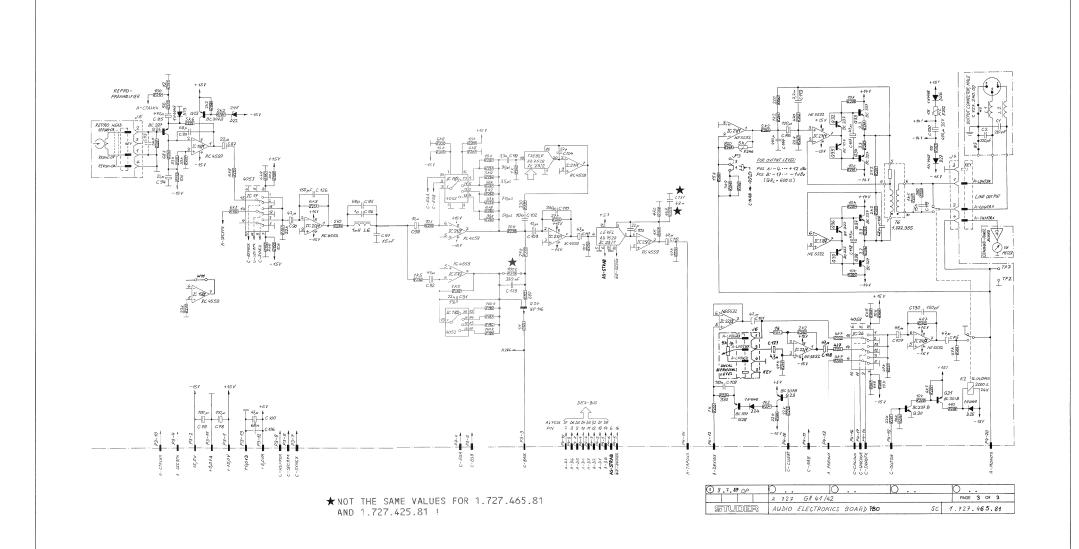
This	R243
R.   203   371114473   47   KORN   22. 0.25%   NF   R.   40.4   371114222   2.2   KORN   22. 0.25%   NF   KORN   40.4   36.016502   3   KORN   10%   0.3   10%   0.3   10%   0.4   10%   0.4   10%	R243
R ( 6.4	8240 55.01.8902 5 KONM 103.0 5 H. PMG  R277 57.11.4921 820 CDM 23.0 25M MF  R249 57.11.4921 3.0 KONM 23.0 25M MF  R250 57.11.41453 47 KONM 23.0 25M MF  R251 37.11.4473 47 KONM 23.0 25M MF  R252 57.11.4473 47 KONM 23.0 25M MF  R252 57.11.4473 130 0 MM 24.0 22M MF  R252 57.11.4473 130 0 MM 24.0 22M MF  R255 57.11.4021 130 0 MM 24.0 22M MF  R255 57.11.4021 27 KONM 25.0 25M MF  R255 57.11.4021 27 KONM 25.0 25M MF  R259 57.11.4071 70 DM 24.0 22M MF  R259 57.11.4071 10 KONM 24.0 22M MF  R259 57.11.4021 12 KONM 25.0 22M MF  R250 57.11.4021 12 KONM 25.0 22M MF  R250 57.11.4021 12 KONM 25.0 22M MF  R250 57.11.4022 12 KONM 25.0 22M MF  R260 57.11.4022 12 KONM 25.0 22M MF  R260 57.11.4023 10 KONM 25.0 22M MF  R260 57.11.4022 12 KONM 25.0 22M MF  R260 57.11.4022 2.2 KONM 25.0 22M MF  R260 57.11.4023 10 KONM 25.0 22M MF  R260 57.11.4023 2.4 KONM 25.0 22M MF  R260 57.11.4023 2.4 KONM 25.0 22M MF  R260 57.11.4023 2.2 KONM 25.0 22M MF  R260 57.11.4023 2.4 KONM 25.0 22M MF  R260 57.11.4023 2.2 KONM 25.0 22M MF  R260 57.11.4023 2.2 KONM 25.0 22M MF  R270 57.11.4023 2.2 KONM 25.0 22M MF  R271 57.11.4023 10 KONM 25.0 22M MF  R272 57.11.4023 10 KONM 25.0 22M MF  R273 57.11.4023 10 KONM 25.0 22M MF  R273 57.11.4023 10 KONM 25.0 22M MF  R273 57.11.403 10 KONM 25.0 22M MF  R274 57.11.403 10 KONM 25.0 22M MF  R275 57.11.403 10 KONM 25.0 22M MF  R277 57.11.403 10 KONM 25.0 22M MF  R278 57.11.403 10 KONM 25.0 22M MF  R279 57.11.403 10 KONM 25.0 22M MF  R288 57.11.403 10 KONM 25.0 22M MF  R289 57.11.403 10 KONM 25.0 22M MF  R2
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R278 57.11.4103 10 KOhm 2%, 0.25M. MF  S T U D E R (00) 87/05/20 GP AUDIO ELECTRONICS BOARD PBO 1.727.465.00 PAGE 5  IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  R280 57.11.4339 3.3 Ohm 2%, 0.25M. MF R281 57.11.4222 2.2 KOhm 2%, 0.25M. MF R282 57.11.4222 2.2 KOhm 2%, 0.25M. MF R283 57.11.4222 3.10 KOhm 2%, 0.25M. MF R284 57.11.4339 3.3 Ohm 2%, 0.25M. MF R285 57.11.433 10 KOhm 2%, 0.25M. MF R285 57.11.433 3.3 Ohm 2%, 0.25M. MF R286 57.11.433 3.3 Ohm 2%, 0.25M. MF R287 57.11.437 3.3 Ohm 2%, 0.25M. MF R288 57.11.4103 10 KOhm 2%, 0.25M. MF R289 57.11.437 3.3 Ohm 2%, 0.25M. MF R280 57.11.431 10 KOhm 2%, 0.25M. MF R280 57.11.431 10 KOhm 2%, 0.25M. MF R280 57.11.431 10 KOhm 2%, 0.25M. MF R293 57.11.431 10 KOhm 2%, 0.25M. MF R293 57.11.441 10 KOhm 2%, 0.25M. MF R203 57.11.4410 18 Ohm 2%, 0.25M. MF R203 57.1	R278 57.11.4103 10 KDhm 2% 0.25% MF  STUDER (00) 87/05/20 GP AUDIO ELECTRONICS BOARD PBO 1.727.465.00 PAGE  IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF  R280 57.11.4237 3.3 00m 2% 0.25% MF  R281 57.11.4222 2.2 KDhm 2% 0.25% MF  R282 57.11.4222 2.2 KDhm 2% 0.25% MF  R283 57.11.4329 3.3 Dhm 2% 0.25% MF  R284 57.11.4339 3.3 Dhm 2% 0.25% MF  R285 57.11.4339 3.3 Dhm 2% 0.25% MF  R285 57.11.4339 3.3 Dhm 2% 0.25% MF  R286 57.11.4339 3.3 Dhm 2% 0.25% MF  R287 57.11.431 10 KDhm 2% 0.25% MF  R288 57.11.4103 10 KDhm 2% 0.25% MF  R289 57.11.4103 10 KDhm 2% 0.25% MF  R280 57.11.410 10 KDhm 2% 0.25% MF  R280 57.11.410 11 KDhm 2% 0.25% MF  R291 57.11.415 11 KDhm 2% 0.25% MF  R290 57.11.410 11 KDhm 2% 0.25% MF  R290 57.11.410 11 KDhm 2% 0.25% MF  R291 57.11.410 11 KDhm 2% 0.25% MF  R291 57.11.410 11 KDhm 2% 0.25% MF  R293 57.11.410 11 KDhm 2% 0.25% MF  R294 57.11.410 11 KDhm 2% 0.25% MF  R295 57.11.410 11 KDhm 2
ND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF.  R280 57.11.4339 3.3 Ohm 2%. 0.25W. MF R281 57.11.4222 2.2 KOhm 2%. 0.25W. MF R282 57.11.4339 3.3 Ohm 2%. 0.25W. MF R283 57.11.4339 3.3 Ohm 2%. 0.25W. MF R284 57.11.4339 3.3 Ohm 2%. 0.25W. MF R285 57.11.4303 10 KOhm 2%. 0.25W. MF R285 57.11.4403 10 KOhm 2%. 0.25W. MF R287 57.11.4403 10 KOhm 2%. 0.25W. MF R289 57.11.4472 4.7 KOhm 2%. 0.25W. MF R289 57.11.4472 4.7 KOhm 2%. 0.25W. MF R289 57.11.4413 10 KOhm 2%. 0.25W. MF R289 57.11.4413 10 KOhm 2%. 0.25W. MF R290 57.11.4413 110 KOhm 2%. 0.25W. MF R290 57.11.4413 18 Ohm 2%. 0.25W. MF R291 57.11.4412 18. Ohm 2%. 0.25W. MF R292 57.92.1151 18 Ohm 2%. 0.25W. MF R292 57.92.1151 18 Ohm 2%. 0.25W. MF R292 57.92.1151 18 Ohm 2%. 0.25W. MF R292 57.10.4522 1.5 KOhm 2%. 0.25W. MF R292 57.10.4522 1.5 KOhm 2%. 0.25W. MF R292 57.10.452 1.5 KOhm 2%. 0.25W. MF R293 57.11.4100 18 Ohm 2%. 0.25W. MF R292 57.10.452 1.5 KOhm 2%. 0.25W. MF R293 57.11.405 1.5 KOhm 2%. 0.25W. MF R203 57.10.405 1.5 KOhm 2%. 0.25W. MF R203 57.10.	ND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUF  R280 57.11.4239 3.3 Ohm 2%, 0.25%, MF  R281 57.11.4222 2.2 KOhm 2%, 0.25%, MF  R283 57.11.4339 3.3 Ohm 2%, 0.25%, MF  R284 57.11.4103 10 KOhm 2%, 0.25%, MF  R285 57.11.4103 10 KOhm 2%, 0.25%, MF  R286 57.11.4103 10 KOhm 2%, 0.25%, MF  R287 57.11.4133 13 Ohm 2%, 0.25%, MF  R287 57.11.4133 43 Ohm 2%, 0.25%, MF  R280 57.11.4103 10 KOhm 2%, 0.25%, MF  R280 57.11.4103 10 KOhm 2%, 0.25%, MF  R290 57.11.4103 10 KOhm 2%, 0.25%, MF  R291 57.11.4103 10 KOhm 2%, 0.25%, MF  R292 57.02.1151 8 Ohm 2%, 0.25%, MF  R293 57.11.4100 18 Ohm 2%, 0.25%, MF  R201 57.11.4100 18 Ohm 2%, 0.25%, MF  R
R. 280 57.11.4339 3.3 Ohm 2% 0.25% MF R. 281 57.11.4222 2.2 KOhm 2% 0.25% MF R. 282 57.11.4222 2.2 KOhm 2% 0.25% MF R. 283 57.11.4339 3.3 Ohm 2% 0.25% MF R. 283 57.11.4339 3.3 Ohm 2% 0.25% MF R. 285 57.11.4339 3.3 Ohm 2% 0.25% MF R. 286 57.11.4339 3.3 Ohm 2% 0.25% MF R. 287 57.11.4339 3.3 Ohm 2% 0.25% MF R. 288 57.11.4339 3.3 Ohm 2% 0.25% MF R. 288 57.11.4339 3.3 Ohm 2% 0.25% MF R. 288 57.11.430 10 KOhm 2% 0.25% MF R. 289 57.11.471 470 Ohm 2% 0.25% MF R. 290 57.11.491 390 Ohm 2% 0.25% MF R. 291 57.11.491 390 Ohm 2% 0.25% MF R. 292 57.21.15 10 Ohm 2% 0.25% MF R. 291 57.11.4910 10 Ohm 2% 0.25% MF R. 292 57.21.15 10 Ohm 2% 0.25% MF R. 293 57.11.4910 10 Ohm 2% 0.25% MF R.	R280 57.11.4339 3.3 Ohm 2%, 0.25%, MF R281 57.11.4222 2.2 KDhm 2%, 0.25%, MF R282 57.11.4222 2.2 KDhm 2%, 0.25%, MF R283 57.11.4339 3.3 Ohm 2%, 0.25%, MF R283 57.11.4339 3.3 Ohm 2%, 0.25%, MF R285 57.11.4339 3.1 Okhm 2%, 0.25%, MF R286 57.11.4339 3.1 Okhm 2%, 0.25%, MF R287 57.11.4472 4.7 KDhm 2%, 0.25%, MF R289 57.11.4472 4.7 KDhm 2%, 0.25%, MF R289 57.11.4472 4.7 KDhm 2%, 0.25%, MF R290 57.11.4471 470 Ohm 2%, 0.25%, MF R290 57.11.4391 300 Ohm 2%, 0.25%, MF R291 57.11.431 100 Ohm 2%, 0.25%, MF R292 57.21.15 11 00 Ohm 2%, 0.25%, MF R293 57.11.4100 18 Ohm 2%, 0.25%, MF R293 57.31.4100 18 Ohm 2%, 0.25%, MF R294 57.31, MF R295 57.31, M
R280 57.11.4339 3.3 Ohm 2% 0.25W MF R281 57.11.4222 2.2 KOhm 2% 0.25W MF R282 57.11.4323 3.3 Ohm 2% 0.25W MF R283 57.11.4333 3.3 Ohm 2% 0.25W MF R284 57.11.4333 3.3 Ohm 2% 0.25W MF R285 57.11.433 3.3 Ohm 2% 0.25W MF R286 57.11.433 3.3 Ohm 2% 0.25W MF R287 57.11.433 3.3 Ohm 2% 0.25W MF R288 57.11.403 10 KOhm 2% 0.25W MF R289 57.11.431 390 Uhm 2% 0.25W MF R299 57.11.431 390 Uhm 2% 0.25W MF R290 57.11.431 390 Uhm 2% 0.25W MF R290 57.11.431 390 Uhm 2% 0.25W MF R291 57.11.431 390 Uhm 2% 0.25W MF R292 57.92.115 10 KOhm 2% 0.25W MF R292 57.92.116 10 KOhm 2% 0.25W MF R201 57.11.430 18 Ohm 2% 0.25W MF R201 57.11.430 18 Ohm 2% 0.25W MF R201 57.11.430 18 Ohm 2% 0.25W MF R201 57.01.45B 10 HM 2% 0.25W MF R201 57.30.1068 10 HM 2% 0.25W MF R201 57.30.30.006 8 Ohm 2% 0.25W MF	R280 57.11.4339 3-3 Ohm 2% 0.25% MF R281 57.11.4222 2-2 kOhm 2% 0.25% MF R282 57.11.4223 3-2 kOhm 2% 0.25% MF R283 57.11.4339 3-3 Ohm 2% 0.25% MF R284 57.11.4103 10 kOhm 2% 0.25% MF R285 57.11.4103 10 kOhm 2% 0.25% MF R286 57.11.4103 10 kOhm 2% 0.25% MF R287 57.11.4103 10 kOhm 2% 0.25% MF R288 57.11.4103 10 kOhm 2% 0.25% MF R290 57.11.439 10 kOhm 2% 0.25% MF R290 57.11.4491 30 Ohm 2% 0.25% MF R290 57.11.4491 10 KOhm 2% 0.25% MF R291 57.11.4491 130 Ohm 2% 0.25% MF R292 57.92.115 18 Ohm 2% 0.25% MF R292 57.92.115 18 Ohm 2% 0.25% MF R293 57.11.4180 118 Ohm 2% 0.25% MF R293 57.11.4180 18 Ohm 2% 0.25% MF R293 57.10.168 16 Dhm 150mA, PTC R293 57.10.168 16 Dhm 150mA, PTC R294 59.03.0166 8 Dhm 150mA, PTC R295 53.03.0166 8 Dhm 150mA 150mA R296 53.03.0166 8 Dhm 150mA 150mA R297 53.03.0166 8 Dhm 150mA R298 53.03.0166 8 Dhm 150mA R298 53.03.0166 8 Dhm 150mA R299 53.03.0166 8 Dhm 150mA R290 50.03.0166 8 Dhm 150mA R290 50mA R290
R283 57.11.4133 3.3 0hm 22, 0.25% MF R285 57.11.4103 10 K0hm 22, 0.25% MF R286 57.11.4103 10 K0hm 22, 0.25% MF R287 57.11.4127 4.7 K0hm 22, 0.25% MF R289 57.11.4128 11 K0hm 22, 0.25% MF R290 57.11.4191 300 0hm 24, 0.25% MF R291 57.11.4191 300 0hm 24, 0.25% MF R292 57.92.1151 18 0hm 150mA, PTC R293 57.11.4190 18 0hm 22, 0.25% MF R293 57.11.4190 18 0hm 22, 0.25% MF R293 57.11.4190 18 0hm 27, 0.25% MF R203 57.11.4190 18 0hm 27, 0.25% MF R203 57.11.4190 18 0hm 27, 0.25% MF R203 53.03.0168 16-Pole IC Socket XIC18 53.03.0168 16-Pole IC Socket XIC18 53.03.0168 8-Pole IC Socket XIC21 53.03.0166 8-Pole IC Socket XIC21 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC23 53.03.0166 8-Pole IC Socket XIC24 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC26 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC26 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket	R283 57.11.4339 3.3 Ohm 2%. 0.25% MF  R284 57.11.4103 10 KOhm 2%. 0.25% MF  R285 57.11.4103 10 KOhm 2%. 0.25% MF  R287 57.11.437 3.3 Ohm 2%. 0.25% MF  R287 57.11.437 3.3 Ohm 2%. 0.25% MF  R288 57.11.431 30 KOhm 2%. 0.25% MF  R290 57.11.4391 390 Ohm 2%. 0.25% MF  R291 57.11.4391 390 Ohm 2%. 0.25% MF  R292 57.92.1151 18 Ohm 150mA. PTC  R293 57.11.430 18 Ohm 2%. 0.25% MF  R293 57.11.430 18 Ohm 2%. 0.25% MF  R293 57.11.430 18 Ohm 150mA. PTC  R201 51.30.3068 16-Pole  R201 51.30.3068 16-Pole  R201 53.03.3068 16-Pole  R202 53.03.3068 8-Pole  R202 53.03.3068 8-Pole  R202 53.03.3065 8-Pole  R202 53.03.3065 8-Pole  R202 53.03.3066 8-Pole  R202 50.03.3066 8-Pole  R202 50
R287 57.11.4072 4-7 KOhm 22. 0.25% MF R289 57.11.4071 470 Ohm 22. 0.25% MF R290 57.11.4071 470 Ohm 22. 0.25% MF R291 57.11.4071 390 Ohm 22. 0.25% MF R292 57.11.4071 18 Ohm 22. 0.25% MF R292 57.21.15 18 Ohm 23. 0.25% MF R293 57.11.4080 18 Ohm 24. 0.25% MF R293 57.11.4080 18 Ohm 24. 0.25% MF R293 57.11.4080 18 Ohm 24. 0.25% MF T2 54.02.0320 Plug 2.860.8 AMP T2 54.02.0320 Plug 2.860.8 AMP M11 57.11.4000 Wire Bridge  XIC17 53.03.0168 16-Pole IC Socket XIC18 53.03.0168 16-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC23 53.03.0166 8-Pole IC Socket XIC24 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC26 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket	R287 37.11.4472 4.7 kDnm 2%. 0.25W. MF R288 57.11.4471 10 kDnm 2%. 0.25W. MF R290 57.11.4471 470 dDnm 2%. 0.25W. MF R291 57.11.4391 370 DDnm 2%. 0.25W. MF R292 57.92.115.1 18 DDnm 2%. 0.25W. MF R293 57.11.4180 18 DDnm 2%. 0.25W. MF R293 57.03.0168 16-Pole IC Socket RIC18 53.03.0168 16-Pole IC Socket RIC20 53.03.0166 8-Pole IC Socket RIC20 53.03.0166 8-Pole IC Socket RIC22 53.03.0166 8-Pole IC Socket RIC24 53.03.0166 8-Pole IC Socket RIC25 53.03.0166 8-Pole IC Socket RIC25 53.03.0166 8-Pole IC Socket RIC26 53.03.0166 8-Pole IC Socket RIC25 53.03.0166 8-Pole IC Socket RIC26 53.03.0166 8-Pole IC Socket
R201 57-11.4152 1.5 kOhm 22, 0-25W, MF R202 57-02-1151 18 0 hm 25, 0-25W, MF R203 57-11.4180 18 0 hm 22, 0-25W, MF T0 1.022.355.00 Line Output Trafo St TP7 56.02.0320 Plug 2.89-0.8 AMP TP7 56.02.0320 Plug 2.89-0.8 AMP W11 57-11.4000 Wire Bridge  XIC17 53.03.0168 16-Pole IC Socket XIC18 53.03.0168 16-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC23 53.03.0166 8-Pole IC Socket XIC24 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC28 53.03.0166 8-Pole IC Socket XIC29 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC28 53.03.0166 8-Pole IC Socket XIC29 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 8-Pole IC Socket XIC28 53.03.0166 8-Pole IC Socket XIC29 53.03.0166 8-Pole IC Socket XIC29 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socke	R291 57-11-4152 1-5 KDhm 223, 0-2544, MF R292 57-0-21151 18 Ohm 254, 0-2546, MF R293 57-11-4180 18 Ohm 254, 0-2546, MF R293 57-11-4180 18 Ohm 254, 0-2546, MF R293 57-11-4180 18 Ohm 254, 0-2546, MF R293 54-02-0320 Plug 2-80-8 AMF R11 57-11-4000 Wire Bridge R294 AMF R11 57-11-4000 Wire Bridge R294 AMF R11 53-03-0168 16-Pole IC Socket R18 53-03-0168 16-Pole IC Socket R19 53-03-0166 8-Pole IC Socket R20 53-03-0166 8-Pole IC Socket R20 53-03-0166 8-Pole IC Socket R21 53-03-0166 8-Pole IC Socket R22 53-03-0166 8-Pole IC Socket R225 53-03-0166 8-Pole IC Socket R226 F226 F.
T  1.022.355.00   Line Output Trafo   St	Tb   1.022-355-00   Line Output Trafo   St
TP7   54-02-0320   Plug 2-89-0-5   AMP	TP7 54.02.0320 Plug 2-890-8 AME  N11 57.11.4000  XIC17 53.03.0168 16-Pole IC Socket  XIC18 53.03.0168 16-Pole IC Socket  XIC19 53.03.0166 8-Pole IC Socket  XIC20 53.03.0166 8-Pole IC Socket  XIC21 53.03.0166 8-Pole IC Socket  XIC22 53.03.0166 8-Pole IC Socket  XIC22 53.03.0166 8-Pole IC Socket  XIC23 53.03.0166 8-Pole IC Socket  XIC24 53.03.0166 8-Pole IC Socket  XIC25 53.03.0166 8-Pole IC Socket
XIC18 53.03.0168 16-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC20 53.03.0166 8-Pole IC Socket XIC21 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC23 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC26 53.03.0166 8-Pole IC Socket XIC27 53.03.0168 8-Pole IC Socket XIC28 53.03.0168 8-Pole IC Socket XIC29 53.03.0168 8-Pole IC Socket XIC20 53.03.0168 8-Pole IC	XIC18
XIC21 53.03.0166 8-Pole IC Socket XIC22 53.03.0166 8-Pole IC Socket XIC23 53.03.0165 20-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC25 53.03.0166 8-Pole IC Socket XIC26 53.03.0166 8-Pole IC Socket XIC27 53.03.0166 0-Pole IC Socket  STUDER (00) 87/05/20 GP AUDIO ELECTRUNICS BOARD PBO 1.727.465.00 PAGE 6	XIC21 53.03.0166 8-Pole IC Socket  XIC22 53.03.0166 8-Pole IC Socket  XIC23 53.03.0165 20-Pole IC Socket  XIC24 53.03.0166 8-Pole IC Socket  XIC25 53.03.0166 8-Pole IC Socket  XIC25 53.03.0166 IS-Pole IC Socket
XIC25 53.03.0166 8-Pole IC Socket XIC26 53.03.0168 16-Pole IC Socket XIC27 53.03.0168 8-Pole IC Socket XIC27 53.03.0106 8-Pole IC Socket  STUDER (00) 87/05/20 GP AUDIO ELECTRUNICS BOARD PBO 1.727.465.00 PAGE 6	XIC25 53.03.0166 8-Pole IC Socket XIC26 53.03.0168 16-Pole IC Socket
IND. POS-NO. PART NO. VALUE SPECIFICATIONS / ENVIVALENT MANUF.	
	S T U D E R (00) 87/05/20 GP AUDIO ELECTRUNICS BOARD PBO 1.727.465.00 PAGE
	IND. POS.NO. PART NO. VALUE SPECIFICATIONS / EQUIVALENT MANUE

A807

7/103

AUDIO ELECTRONICS (PBO) 1.727.465.81 GRP41/42
AUDIO ELECTRONICS (PBO) 1.727.425.81 GRP41/42
- LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)

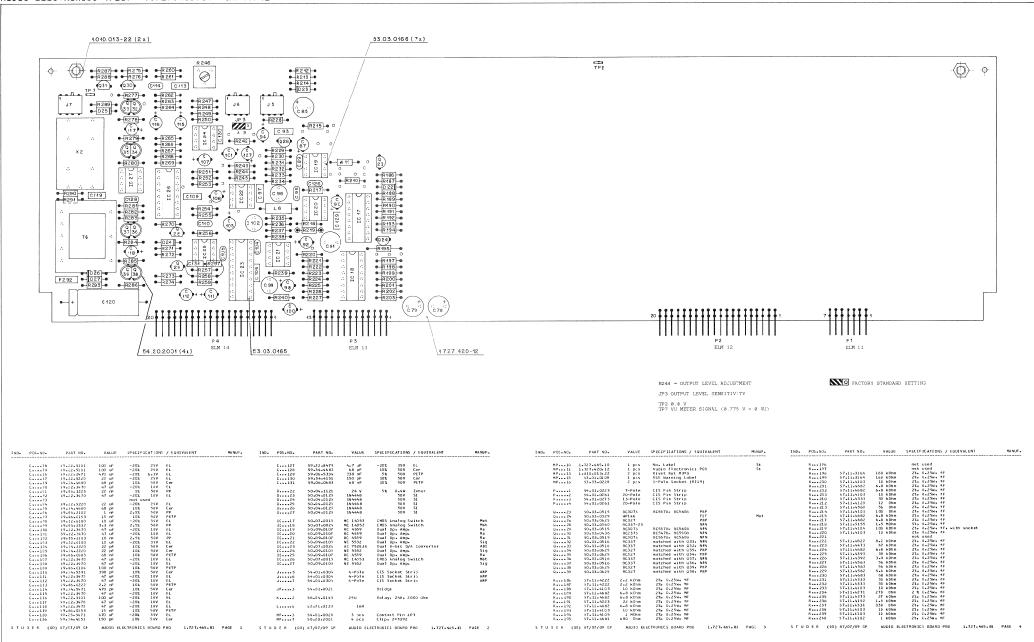




STUDER A807 7/104



AUDIO ELECTRONICS (PBO) 1.727.465.81 GRP41/42





# AUDIO ELECTRONICS (PBO) 1.727.465.81 GRP41/42

JIVALENT MANUF.	SPECIFICATIONS / 6	VALUE	PART NO.	POS.NO.	IND.
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm 47 kOhm	57.11.4472 57.11.4473 57.11.4102	R242 R243	
	2%, 0.25W, MF	1 k0hm 2•2 k0hm	57.11.4222	R • • • 244 R • • • 245	
	10%, 0.5 W. PMG 2%, 0.25W, MF	5 kOhm 820 Ohm	58.01.8502 57.11.4821	R • • • 246 R • • • 247	
	2%, 0.25W, MF not used 2%, 0.25W, MF	3.9 kOhm 15 kOhm	57•11•4392 57•11•4153	R • • • 2 48 R • • • 2 49 R • • • 2 5 0	
	2%, 0.25W, MF 2%, 0.25W, MF	47 kOhm	57.11.4473 57.11.4472	R • • • 251 R • • • 252	
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	4.7 kOhm	57•11•4472 57•11•4331	R • • • 253 R • • • 254	
	2% 0 0 25W MF	1 kOhm	57.11.4102 57.11.4273	R • • • 255 R • • • 256	
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	1 kOhm 470 Ohm 10 kOhm	57.11.4102 57.11.4471 57.11.4103	R • • • 257 R • • • 258 R • • • 259	
	2%, 0.25W, MF 2%, 0.25W, MF	220 Ohm 1.2 kOhm	57•11•4221 57•11•4122	R260 R261	
	2%, 0.25W, MF 2%, 0.25W, MF	470 Ohm 22 kΩhm	57.11.4471 57.11.4223	R • • • 262 R • • • 263	
	2%, 0.25W, MF 2%, 0.25W, MF	2.2 kOhm 47 kOhm	57.11.4222 57.11.4473	R • • • 264 R • • • 265	
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 6.8 kOhm 6.8 kOhm	57.11.4103 57.11.4682 57.11.4682	R266 R267 R268	
	2%, 0.25W, MF 2%, 0.25W, MF	10 k0hm 4.7 k0hm	57.11.4103 57.11.4472	R 269	
	2%, 0.25W, MF 2%, 0.25W, MF	1.2 kOhm 22 kOhm	57•11•4122 57•11•4223	R • • • 271 R • • • 272	
	2%, 0.25W, MF 2%, 0.25W, MF	22 kOhm 47 kOhm	57.11.4223	R • • • 273 R • • • 274 R • • • 275	
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	22 kOhm 10 kOhm 3.3 Ohm	57.11.4223 57.11.4103 57.11.4339	R • • • 275 R • • • 276 R • • • 277	
	2%, 0.25W. MF	10 k0hm	57.11.4103	R278	
1.727.465.81 PAGE 5	CTRONICS BOARD PBO	AUDIO ELE	) 87/07/09 GP	D E K (00	STU
JIVALENT MANUF.	SPECIFICATIONS /	VALUE	PART NO.		IND.
	Z%, 0.25W, MF	10 kOhm	57-11-4103	R279	
	2%, 0.25W, MF 2%, 0.25W, MF	3.3 Ohm 2.2 kOhm	57-11-4339 57-11-4222	R • • • 280 R • • • 281	
	2%, 0.25W, MF 2%, 0.25W, MF	2.2 kOhm 3.3 Ohm	57•11•4222 57•11•4339	R • • • 282 R • • • 283	
	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF	10 kOhm 10 kOhm	57.11.4103 57.11.4103 57.11.4339	R284 R285 R286	
	2% 0.25W MF 2% 0.25W MF	3.3 Ohm 4.7 kOhm 10 kGhm	57-11-4472 57-11-4103	R287 R288	
	2%, 0.25W, MF 2%, 0.25W, MF	470 Ohm 390 Ohm	57.11.4471 57.11.4391	R289 R290	
	2%, 0.25W, MF 150mA, PTC	1.5 kOhm 18 Ohm	57.11.4152 57.92.1151	R291 R292	
	2%, 0.25W, MF 2%, 0.25W, MF	18 Ohm 4.7 kOhm	57•11•4180 57•11•4472	R • • • 293 R • • • 297	
5t	Line Output Traf		1.022.355.00		
AMP AMP	Plug 2.8¢0.8 Plug 2.8¢0.8		54.02.0320 54.02.0320	TP2 TP7	
	Wire Bridge		57.11.4000	w••••11	
	IC Socket IC Socket	16-Pole 16-Pole	53.03.0168 53.03.0168	XIC17 XIC18	
	IC Socket IC Socket IC Socket	8-Pole	53.03.0166 53.03.0166	XIC •• 19 XIC •• 20	
	IC Socket IC Socket	8-Pole 8-Pole	53.03.0166 53.03.0166	XIC21 XIC22	
	IC Socket IC Socket IC Socket	20-Pole 8-Pole 8-Pole	53.03.0165 53.03.0166 53.03.0166	XIC • • 23 XIC • • 24 XIC • • 25	
	IC Socket IC Socket	16-Pole 8-Pole	53.03.0168 53.03.0166	XIC26 XIL27	
1•727•465•81 PAGE	CTRONICS BOARD PBO	AUDIO EL	)) 87/07/09 GP	D E R (00	STU
UIVALENT MANUF	SPECIFICATIONS /	VALUE	PART NO.	P05.N0.	IND.
	P = Polyester	olytic PET	EL = Electr en MF = Metal	Ceramic	Cer =
	= Silicon	Film SI	en MF = Metai	Polypropyl	PP =

ORIG 87/07/09

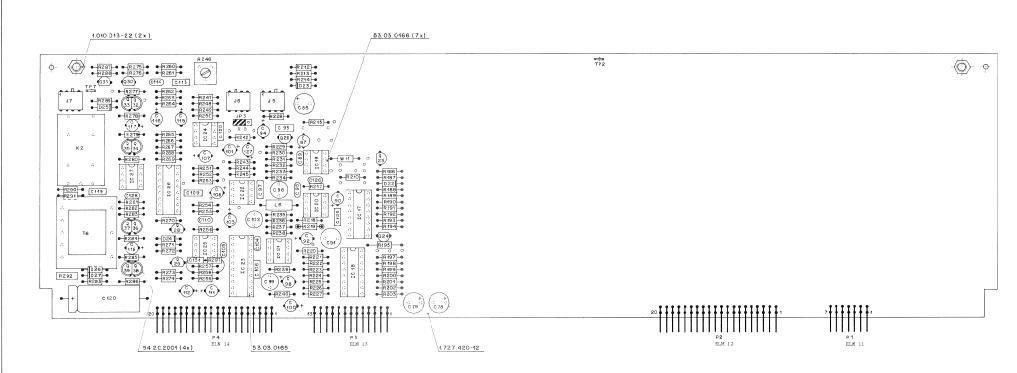
S T U D E R (00) 87/07/09 GP AUDIO ELECTRONICS BOARD PBD 1.727.465.81 PAGE 7

STUDER A807



7/107

AUDIO ELECTRONICS (PBO) 1.727.425.81 GRP41/42



R246 - OUTPUT LEVEL ACJUSTMENT

JP3 OUTPUT LEVEL SENSITIVITY

TP2 0.0 V

TP7 VU METER SIGNAL (8.775 V - 0 VU)

10 FACTORY STANDARD SETTING

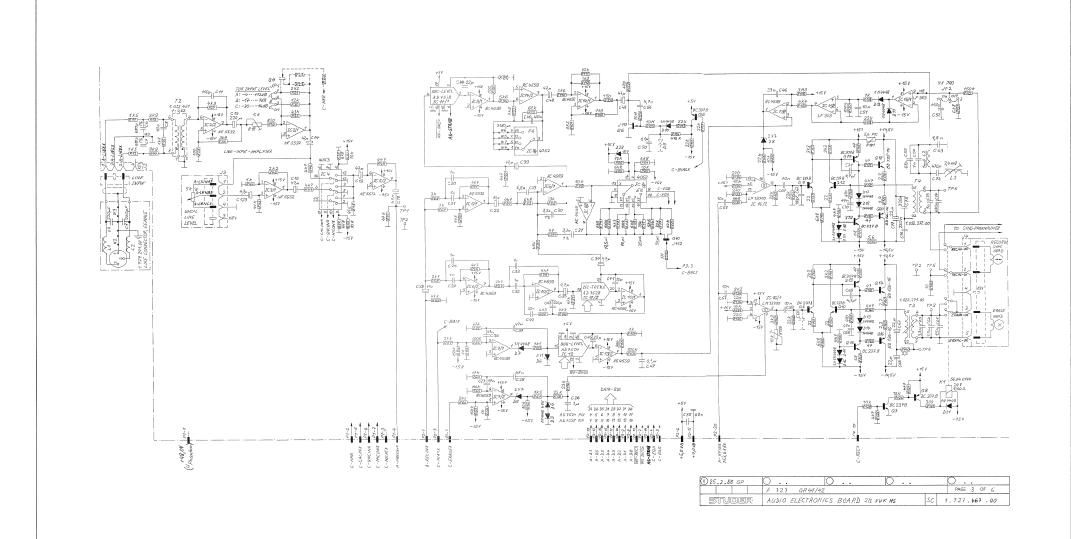
:ND-	POS-NO-	PART NO.	VALUE	SPECI°ICATIONS / EQUIVALENT	MANUF
	A1	1.727.465.81		AUDIO ELECTRONICS BOARD PBO	
	C131	59.06.0474	0.470=	10%, 50V, PETP	
	MP10	1.727.425.10	1 pc:	No. Label	
	R215 R297	57 • 1 1 • 447 3 57 • 1 1 • 4182	47 kOhn 1.8 kOhn	2%, 3.25M, MF, with socket 2%, 3.25W, MF	

Cer = Ceranic (t = Electrolytic = ZET /= Polyester | PP = Polyyroylon M = ZET | PI = SITUE | PI

ORIG 87/12/18

S T U D E R (00) 87/12/18 SP AUDIO ELECTRON. PBO (SERVICE) 1.727.425.81 PAGE 1

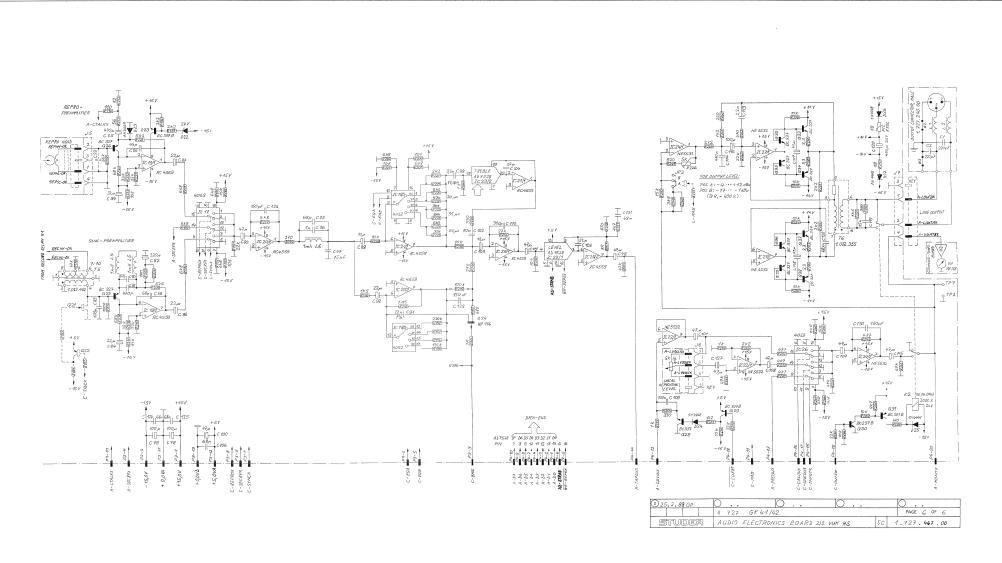




AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42 - LINE OUTPUT CONNECTOR 1.727.240.00 (SEE PAGE 7/32)
- LINE INPUT CONNECTOR 1.727.241.00 (SEE PAGE 7/33)

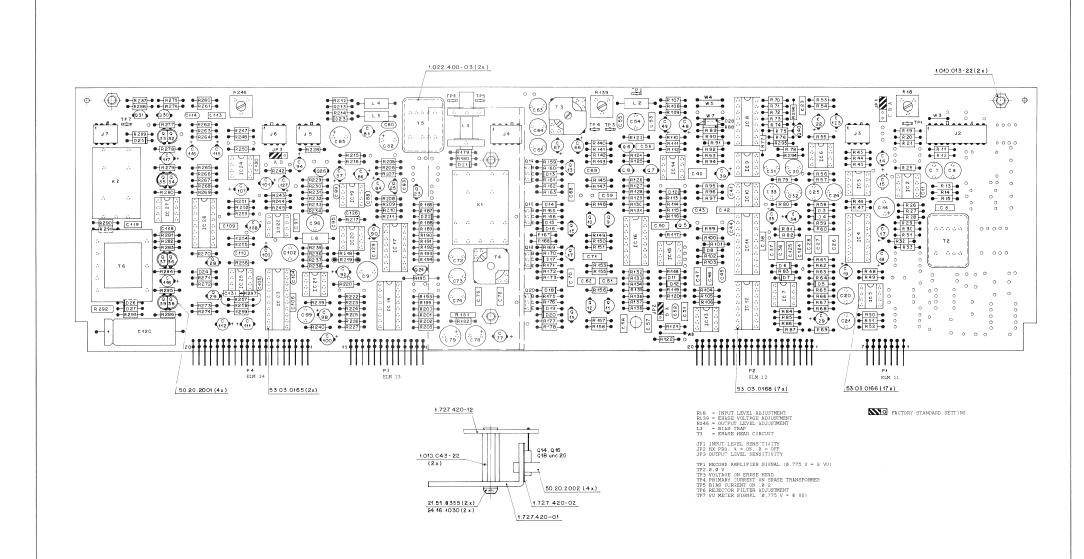
A807







AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42





## AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42

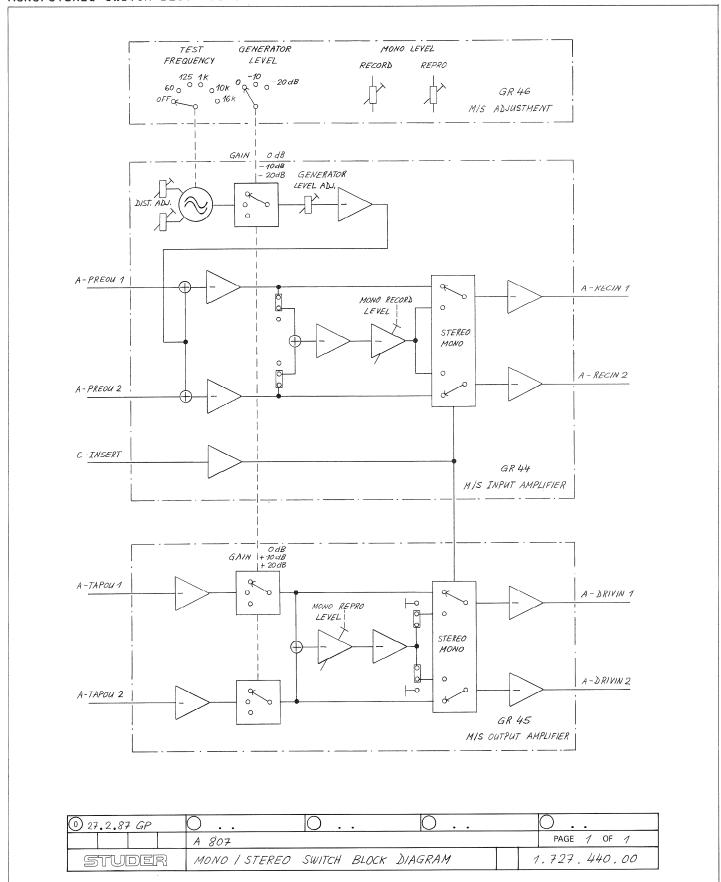
IND. POS.NO.	PART NO. 59-D5-1681	VALUE 680 pF	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO.	9aRT NO. 59a06a0683	VALUE 68 1F	SPECIFICATIONS / EQUIVALENT  10% 50V PETP 10% 50V PETP	HANUF.	INO.	POS-NO-	PART NO. 50.03.0436 50.03.0436	BC2378 BC2378	SPECIFICATIONS / EQUIVALENT  BC547B, BC550B NPN BC547B, BC550B NPN	MANUF.	R10	3 57.11.347		SPECIFICATIONS / EQUIVALENT  1%, 0.25W, MF  1%, 0.25W, MF	HANUF.
C7 C8 C11 C14 C15	59.05.1681 59.05.1681 59.06.0103 59.34.4151 59.22.3470 59.22.3470 59.22.3470 59.22.3470 59.22.3470 59.22.3470 59.22.3470 59.20.2102 59.05.2102 59.05.2102 59.05.2102 59.05.2102 59.05.2102 59.05.2102 59.05.2102 59.05.2102	10 nF 150 pF 47 uF 47 uF	12 50V PP 13 50V PP 103 50V PETP 103 50V Cer -203 10V EL -203 10V EL	C126 C127 C128 C129	59-34-415L 59-22-8479 59-34-4683	150 pF 4.7 uF 68 pF 230 nF	10% 50V Car -20% 35V EL 10% 50V Car 5% 50V PFTP			Q12 Q13 Q14 Q15	50.03.0436 50.03.0515 50.03.0495 50.03.0436	8C2378 8C3078 8D135-16 BC2378	BC5478+ BC550B NPN BC547B- BC550B PNP BC557B- BC550B PNP BC547B- BC550B NPN		R10 R10 R10	5 57.11.339 6 57.11.310 7 57.11.382 8 57.11.318	390 Ohm 100 kOhm 842 kOhm	12. 0.25% MF 12. 0.25% MF 12. 0.25% MF 12. 0.25% MF 12. 0.25% MF	
C16 C18 C19 C20	59.22.2221 59.22.3470 59.22.3470 59.05.2102	220 UF 47 UF 47 UF 1 DF 1 DF	101 507 PETP 103 507 Cer 203 107 Cer 203 107 Et	C130 C131	59.34.4151 59.06.0683 50.04.0125	150 pF 68 nF 1N4448	SOV ST			Q16 Q17 Q18 Q19	50.03.0510 50.03.0515 50.03.0495 50.03.0436	80136-16 BC3078 80135-16 BC2378	BC557B+ BC560B PNP NPN BC547B+ BC550B NPN		R11 R11 R11	0 57.11.356 1 57.11.382 2 57.11.313	8∠ KUNM	1%, 0.25W, MF	
C 21 C 22 C 23 C 24	59.05.2102 59.22.6100 59.06.5682 59.05.2102	1 nF 10 uF 6.8 nF 1 nF 1 nF 1 uF		03 D4 D5 D6	50.04.1102 50.04.1105 50.04.1112 50.04.0125	6.8 V 2.7 V 5.1 V 1N4448	5% 0.4W Zener 5% 0.4W Zener 5% 0.4W Zener 5% 0.4W Zener 50V SI			Q 20 Q 21 Q 22 Q 23	50.03.0510	80136-16 8G3078	not used	Mot	R1 R1 R1 R1	4 57,11,347 5 57,11,322 6 57,11,322	22 kOhm 4T0 kOhm 22 kOhm 22 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
C25 C26 C27 C28	52.01.0673	1 nF 1 uF 47 nF 47 nF 47 uF	51 50V PEP 2-51 50V PP 2-51 50V PP 101 50V PETP 102 50V PETP 103 50V PETP -203 10V EL 13 50V PP	D9 D9 D11 D11	50.04.1105 50.04.0125 50.04.0125 50.04.0125	2.7 V IN4448 IN4448 IN4448	5%, 0.4M Zener not used 50V SI 50V SI			Q25 Q26 Q28 Q29	50.03.03.29 50.03.0625 50.03.0625 50.03.0340 50.03.0515	WP146 BC327 BC327 BC337-25	BC5578, BC5608 PNP FET PNP PNP NPN NPN	Mot	R 11 R 11 R 11	8 57.11.322 9 57.11.310 0 57.11.310	22 kOhm 22 kOhm 1 kOhm 100 kOhm	1% 0.25% MF 1% 0.25% MF 1% 0.25% MF 1% 0.25% MF	
C30 C31	59.05.1332 59.05.1332 59.05.1332 59.05.2102 59.05.2102	3+3 nF 3+3 nF 1 nF	-203 10V EL 13 50V PP 13 50V PP 2-53 50V PP 2-53 50V PP	D13 D14 D15 D16	50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	>3+ 0.4M Zener not used 50V SI 50V SI 50V SI 50V SI 50V SI 50V SI 50V SI 50V SI 50V SI			Q3D Q31 Q32 Q33	50.03.0436 50.03.0515 50.03.0516 50.03.0516	8C3078 BC2378 BC3078 BC337 BC337	BC5578 + BC560B NPN BC5578 + BC550B NPN BC5578 + BC550B NPN BC5578 + BC550B NPN natched with U32 + NPN matched with U32 + NPN matched with U35 + PNP matched with U35 + PNP matched with U35 + PNP matched with U35 + NPN		R R R R	3 57.11.347 4 57.11.510	150 kOhm 470 Ohm 10 MOhm	1%, 0.25M, MF 1%, 0.25M, MF 1%, 0.25W, MF 5%, 0.25W, MF 5%, 0.25M, MF	
C 16 10 C	59.22.8479 59.22.8479 59.06.0473	4.7 UF 4.7 UF 47 NF 47 NF	-20% 35V EL	017 618 019	50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N4448 1N4448 1N4448 1N4448	50V SI 10V SI			Q35 Q36 Q37	50.03.0625 50.03.0625 50.03.0516 50.03.0516	8C327 8C327 8C337 8C337			R R R	6 57.11.310 7 57.11.347 8 57.11.347 9 57.11.310	4.7 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
C36 C39 C40 C41	59.06.0683 59.22.3470 59.06.5474 59.34.2220	68 nF 47 uF 470 nF 22 pF 22 nF	103 50V DETP 103 50V PETP 103 50V PETP 203 10V EL 53 50V PETP 103 50V Cer	D21 D22 D23 D24	50.04.0125 50.04.1121 50.04.0125 50.04.0125	1N4448 24 V 1N4448 1N4448	50V SI 5% 0.4W Zener 50V SI 50V SI			Q39 Q39 Q4)	50.03.0625 50.03.0625 50.03.0350	BC327 BC327 J112	matched with 036, NPN natched with 039, PNP natched with 038, PNP FET	Mot	R13 R13 R13	1 57.11.315 2 57.11.322 3 57.11.322	10 kOhm 15 kOhm 15 kOhm 12 kOhm 220 Ohm 220 Ohm 220 Ohm 220 Ohm	1% 0-25W MF 1% 0-25W MF 1% 0-25W MF 1% 0-25W MF	
2 * * * * * 42 2 * * * * 43 2 * * * * 44 2 * * * * 45	59-22-3470 59-22-3470 59-34-2220 59-34-2220 59-34-4221 59-34-2220 59-34-2220 59-36-0333	22 nF 220 pF 22 pF 22 pF 33 nF	3 3 50 Y Cer 103 50 Y EETP 53 50 Y Cer 104 50 Y Cer 104 50 Y Cer 104 50 Y FETP	D25 D20 D27 D28	50.04.0125 50.04.0125 50.04.0125 50.04.1115	1N4448 1N4448 1N4448 10 V	50V SI 50V SI 50V SI 50V SI 5% 0.4H Zener			R11 R12 R13 R14	57.11.3152 57.11.3152 57.11.3392 57.11.3392	1.5 kOhm 1.5 kOhm 3.9 kOhm 3.9 kOhm	1%, 0-25%, MF 1%, 0-25%, MF 1%, 0-25%, MF 1%, 0-25%, MF		R R R R	5 57.11.322 6 57.11.322 7 57.11.368		1% 0.25% MF 1% 0.25% MF 1% 0.25% MF 1% 0.25% MF	
546 547 STUDER (00	59.06.0104	100 nF	10% 50V PETP 10% 50V PETP LECTS. BOARD 2/2 VUK HS 1.727.467.00 PAGE [	ICZ STUDER (I	>0.09.0105 00) 88/02/16 GF	NE 5532 AUDIO EL	Dual Op. Amp. ECTR. BOARD 2/2 VUK HS 1.727.457.1	Sig 00 PASE 4	s T U	R15 R13 D E R (00	57.11.3182 58.01.8502 38/02/16 GP	1.6 kOhm 5 kOhm AVDIO ELE	1%, 0-25M, MF 10%, 0-5 M, PMG ECTR. 80ARD 2/2 YUK HS 1-727.467.	00 PAGE 7	R13 R13 S.T.U.D.S.R	8 57.11.382 9 58.01.810 (00) 88/02/16	10 kDhm	1%, 0.25%, MF 10%, 0.5 %, PMG .ECTR. BOARD 2/2 VUK HS 1.727.467.0	O PAGE 10
[ND+ PDS+ND+	PART NO.	YALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I ND.	POS.NC.	PART NO.	VALJE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. FOS.N	. PART NO	• VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
C48 C49 C50 C51	59 • 22 • 3470 59 • 22 • 3470 59 • 06 • 0104 59 • 06 • 0103	47 uF 47 uF 100 nF 10 nF 150 pF 1-5 nF	-201 10V EL -201 10V EL 101 50V PETP 101 50V PETP 51 50V Cer 101 50V PETP 2-51 50V PP	IC3 IC4 IC5 IC6	50.09.0105 50.07.0015 50.09.0105 50.09.0107	NE 5532 MC 14053 NE 5532 RC 4559 RC 4559	Dual Op. Amp. CMDS Analog Switch Dual Op. Amp. Dual Op. Amp.	Sig Mot Sig Ra		R 19 R 20 R 21 K 22	57.11.3021 57.11.3123 57.11.3222	820 Onm 12 kOhm 2•2 kOnm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF not used		R1 F1 F1	3 57-11-331	9 2.2 Ohn 1 300 Ohn 2 3.3 kOhn 2 3.3 kOhn	12, 0.25%, MF 12, 0.25%, MF 12, 0.25%, MF 12, 0.25%, MF 12, 0.25%, MF	
C52 C53 C59 C56	59.34.4151 59.06.0152 59.05.2102 59.34.4680	150 pF 1-5 nF 1 nF 68 pF 4-1 nF	-201 10V EL PEP 110 110 110 110 110 110 110 110 110 11	107 108 109 1010	50.09.0107 50.07.0024 50.09.0107 50.09.0107	MC 14052 RC 4559	Dual Op. Amp. CMDS Analog Switch Dual Dp. Amp. Dual Dp. Amp. Dual Dp. Amp. Oud Op. Amp. Oud Op. Amp. Dual Dp. Amp. Dual B-bit U/A Converter Smbit D/A Converter	Sig Mot Sig Ra Ra Mot Ra Ra ADI ADI		R 23 R 24 R 25 R 26	57.11.3433 57.11.3392	43 kOhm 3.9 kOhm 4.3 kOhm	not used not used not used 1%, 0.25%, MF 1%, 0.25%, MF		F1 F1 F1	7 57.11.341 6 57.11.322 9 57.11.322	2 3.3 kOhn 1 470 Ohn 3 22 kOhn 0 22 Ohn	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
C56 C58 C59 C60	59.06.0103 59.06.0103 59.06.0103 59.06.0103	4+1 nF 10 nF 10 nF 10 nF	2.51 50V PP 101 50V Cor 101 50V PETP 101 50V PETP 101 50V PETP	I(11 I(12 I(13 I(14 I(15	50.07.0025 50.07.0002 50.09.0107 50.09.0107 50.09.0101	AD 7528JN AD 7524JN RC 4559 RC 4559 LF 353 LN 13700	Dual 8-bit U/A Converter 8-bit D/A Converter Dual 8p. Amp. Oual 8p. Amp.	ADI Ra Ra		R 27 R 28 R 29 R 32	\$7.11.3432 \$7.11.3101 \$7.11.3682 \$7.11.3103 \$7.11.3682	4-3 kOhm 100 Ohm 6-8 kOhm 10 kOhm 6-8 kOhm 10 kOhm 47 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		F1 R1 F1 F1	3 57.11.333 5 57.11.347	2 3-3 kOhn 2 3-3 kOhn 1 470 Ohn	13+ 0-25W+ MF 13+ 0-25W+ MF 13+ 0-25W+ MF 13+ 0-25W+ MF	
C62 C63 C64	59.06.0103 59.34.4101 59.05.2332 59.05.2332	10 nF 100 pF 3-3 nF 3-3 nF	103 50V PETP 101 50V Cer 2-51 160V PP	1016 1017 1018 1019	50.09.0112 50.07.0015	LN 13700 MC 14053 MC 14052	o-bit Oya Amp. Dual Opa Amp. Dual Opa Amp. Dual Opa Amp. Dual Ora CMOS Analog Switch CMOS Analog Switch	NS Mot Mot		R43 R44 R45	57-11-3103 57-11-3473	10 kOhm 47 kOhm 1 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		81	7 57-11-322 8 57-11-322 9 57-11-347	0 22 Ohn 0 22 Ohn 0 47 Ohn	12, 0.25W, MF 12, 0.25W, MF 12, 0.25W, MF 12, 0.25W, MF	
C++++65 C++++66 C++++67 C++++68	59.05.2152 59.22.6220 59.22.6220 59.05.0473 59.34.0479	1.5 nF 22 uF 22 uF 41 nF	100.5 SOW PEEP 101.1 SOW PEEP 102.1 SOW PEEP 102.1 SOW PEEP 103.1 SOW PEEP 103.1 SOW PEEP 103.1 SOW PEEP 104.1 SOW PEEP 105.1 SOW PEEP 105.1 SOW PEEP 106.1 SOW PEEP 107.1 SOW PEEP 108.1 SOW PEEP 109.1	IC20 IC21 IC22 IC23	50.09.0107 50.09.0107 50.09.0107 50.09.0105 50.09.0105 50.09.0105 50.09.0107	LN 13700 MC 14053 MC 14052 RC 4559 RC 4559 RC 4559 NE 5532 AD 7526JH NE 5532 RC 4559 MC 14053 NE 5532	CNOS Analog Switch Dual Up- Amp- CNOS Analog Switch Dual Up- Amp-	Ra Ra Sig ADI		R46 R47 R48 R49	57-11-3222 57-11-3472 57-11-3472 57-11-3473 57-11-3472 57-11-3132	4.7 kOhm 4.7 kOhm 47 kOhm 4.7 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		R1 R1 R1	57.11.347 2 57.11.347 3 57.11.322 5 57.11.341	9 4.7 kDhn 9 2.2 Ohn 9 47 Dhn	12. 0-25W. MF 12. 0-25W. MF 12. 0-25W. MF 12. 0-25W. MF	
C70 C71 C72	59.06.0473 59.34.0479 59.05.2471	4+1 pF	101 50V Cer 101 50V PETP 101 50V Cer 2-51 630V PP	1025 1025 1020 1027	50.09.0105 50.09.0107 50.07.0015 50.09.0105	NE 5532 RC 4559 MC 14053 NE 5532	Dual Op. Amp. Dual Op. Amp. CMOS Analog Switch Dual Op. Amp.	Sig Ra Mot Sig		R 50 R 51 R 52 R 13	57.11.3473 57.11.3682	1-2 kGhm 4-7 kGhm 47 kGhm 6-6 kGhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		R1 R1 R1	57.11.347 7 57.11.368 8 57.11.368 9 57.11.347	2 4+7 k0hm 0 68 0hm 2 6+8 k0hm 0 47 0hm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
C73 C76 C75 C76	59.05.1102 59.05.1681 59.06.0224 59.06.0224 59.22.6220 59.22.5101	4+T pF 470 pF 1 nF 680 pF 220 nF 220 nF	11 630V PP 11 630V PP 101 50V PETP 101 50V PETP	J2 J3 J4	54.01.0247 54.01.0305 54.01.0305	3-Pole 4-Pole 5-Pole 4-Pole 4-Pole 4-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	ANP ANP ANP ANP ANP		R55 R55 R56	57.11.3472 57.11.3333 57.11.3472 57.11.3272	4-7 kOhm 33 kOhm 4-7 kOhm 2-1 kOhm	1% 0.25% MF 1% 0.25% MF 1% 0.25% MF 1% 0.25% MF		R1 R1	57-11-322 57-11-347 2 57-11-347 3 57-11-322	2 -2 Uhn 47 Ohn 2 -4 -7 kOhn 9 2 -2 Ohr	12. 0-25% MF 12. 0-25% MF 12. 0-25% MF 12. 0-25% MF	
C78 C79 C80 C81	59.34.4680	22 UF 100 UF 100 UF 68 PF 470 PF 220 UF	not used	J5 J7 JP1	54.01.0304 54.01.0304 54.01.0304 54.01.0021	4-Pole 4-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP		R58 R59 R60 R61 R62	57-11-3272 57-11-3223 57-11-3473 57-11-3152 57-11-3103	1 kOhe 2-2 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 1-2 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 2-7 kOhm 2-7 kOhm 2-1 kOhm 2-1 kOhm 2-1 kOhm 1-2 kOhm 1-2 kOhm 1-3 kOhm 1-4 kOhm 1-5 kOhm 1-6 kOhm 1-7 kOhm 1-7 kOhm 1-7 kOhm 1-8 kOhm 1-8 kOhm 1-9 kOhm 1-9 kOhm 1-1 kOhm 1-1 kOhm 1-1 kOhm 1-1 kOhm 1-1 kOhm 1-2 kOhm 1-3 kOhm 1-3 kOhm 1-4 kOhm 1-5 kOhm 1-5 kOhm 1-6 kOhm 1-7 kOhm 1-7 kOhm 1-8 kOhm 1-8 kOhm 1-9 kOhm	13. 0.25% HE 13. 0		H 1   H	77 11.322 17 27 11.322 18 37.11.327 19 37.11.347 19 37.11.347 19 37.11.347 19 37.11.347 19 37.11.347 19 37.11.347 10 37	7 2.2 Cha  2 3.3 Cha  2 3.3 Cha  2 3.3 Cha  2 3.3 Cha  3 3.2 Cha  3 3.3 Cha  3 3 3 Cha  3 C	12: 0 - 224: NE 12: 0 - 224: NE 13: 0 - 224: NE	
C 82 C 81	59.05.2471 59.22.2221 59.34.4101 59.22.5220	100 pF 21 uF	101 507 Cer -201 257 EL	JP2 JP3	54.01.0021 54.01.0021		Bri dge Bri dge			R • • • • 63 R • • • • 64 R • • • • 65	57.11.3154 57.11.3102 57.11.3104	1 kOhm 100 kOhm							
STUCES (O	C) 88/02/16 GP	AUDIO E	ELECTR. BOARD 2/2 YUK HS 1.727.467.00 PAGE 2	STUDER (I	00) 88/02/16 GF	AUDIO EL	ECTR: 804RD 2/2 VUK H5 1:727:467:0	DO PAGE 5	5 1 U	DER (OC	) #8/02/16 SP	AND TO EL	.ECTR. BOARD 2/2 VUK HS 1.727.467.	.00 PAGE 8	STUDER	100) 88/02/16	GP AUDIO E	LECTR. BOARD 2/2 VUK HS 1.727.467.0	DD PAGE 11
IND. POS.NO.	PART NO.	YALUE	SPECIFICATIONS / EQUIVALENT MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.	INC.	P 05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.N	). PART NO	• VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
C85 C86 C87	59.22.2471 59.22.5220 59.22.5220	470 uF 22 uF 22 uF 68 pF 68 pF	-201 6.3V EL -201 25V EL -201 25V EL	K2	56.04.0144 56.04.0143 62.01.0123	40U 20U	Relay: 24V+ 1200 Ohm Relay: 24V+ 2000 Ohm			R66 R67 R68	57-11-3243 57-11-3302 57-11-3473 57-11-3682 57-11-3473 57-11-3682 57-11-3104 57-11-3682	26 kOhm 3 kOhm 3 kOhm 47 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		F1 F1 F1	14 15 16 57-11-321	2 2+2 kOhn	not used not used not used 1% 0.25% MF	
C88 C89 C90 C92	59.34.4680 59.34.4680 59.22.3470 59.05.1223 59.22.5220	68 pF 68 pF 41 uF 22 nF 22 uF	-201 25V EL -201 25V EL -201 25V EL -101 50V Cer -101 50V Cer -201 10V EL	L2 L3 L5 L6	1.177-231-00 62-01-0123 62-01-0123 62-01-0123	LmH 2 • 4mH 1 mH 1 mH 1 mH		St		R 09 R 70 R 71 R 72 R 73 R 74 R 75 R 75 R 76 R 77 R 78 R 79 R 78 R 79 R	57-11-3682 57-11-3393 57-11-3472 57-11-3104	24 kOhm 3 kOhm 3 kOhm 47 kOhm 47 kOhm 49 kOhm 49 kOhm 100 kOhm 100 kOhm 50 kOhm 62 kOhm 62 kOhm 63 kOhm 64 kOhm 65 kOhm 64 kOhm 65 kOhm 64 kOhm 65 kOhm	15 0 - 25 4 WE 15 0 -				2 2.2 kOhn 3 10 kOhn 2 6.8 kOhn	1%, 0-25W, MF 1%, 0-25W, MF 1%, 0-25W, MF 1%, 0-25W, MF	
C93 C94 C95 C96	59.22.5220 59.34.4680 59.05.2102		-202 used -201 25V EL 103 50V Cer 2-53 50V PP 103 50V PETP	HP1 HP2 MP3	54.01.0020 54.01.0020 54.01.0020	4 pcs	Consect Pin JP1 Consect Pin JP2 Consect Pin JP3 Street Nut JM220 Super Nut JM2			R74 R75 R76 R77		6.8 kGhm 100 kGhm 5.6 kGhm 82 kGhm	1%, 0-25% NF 1%, 0-25% NF 1%, 0-25% NF 1%, 0-25% NF		81 81 81 81 81 81 81	71 57-11-328 72 57-11-368 73 57-11-310 74 57-11-310	2 6-8 kOhn 3 10 kOhn 5 1 MOhn	12+ 0-25W+ MF 12+ 0-25W+ MF 12+ 0-25W+ MF 12+ 0-25W+ MF 12+ 0-25W+ MF	
C91 C98 C99 C100	59+00+0153	15 nF 10 uF 3•3 nF 41 uF	101 50V PETP -201 35V EL 2-51 50V PP -201 10V EL	MP4 MP5 MP6 MP7	1.010.043.22	3 pcs 3 pcs 2 pcs 2 pcs 2 pcs 4 pcs 1 pcs 1 pcs 1 pcs 2 pcs 2 pcs 4 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs	Rivet Nut M3*20 Screw M3*8 Washer Clip: 2*1092			R 78 R 79 R 80 R 81	57-11-35-62 57-11-35-62 57-11-3103 57-11-34-72 57-11-3681 57-11-34-73	10 kChm 4-7 kChm 680 Chm 47 kChm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		61 61 61 61	95 57-11-368 96 97 98 57-11-328		1% 0-25% MF not used not used 1% 0-25% MF 1% 0-25% MF	
C10; C102 C103 C104	59.05.232 59.22.3470 59.22.3470 59.05.2103 59.22.6100 59.34.2220 59.34.2220	47 uF 10 nF 10 uF 22 pF	-201 35W E.P -201 10V EL -201 10V Cer -201 10V Cer -201 10V EL	MP8 MP9 MP10 MP11	24-11-0-99 24-16-10-30 50-20-20-20 1-721-420-01 1-721-420-02 1-721-420-12 1-022-400-03 1-010-013-22 50-20-2002 43-01-010-9 53-03-0228	l pes 1 pes 1 pes 1 pes	Heatsink Thermoplastic No. Label Audio Electronics PCB	St St St St		R82 R83 R84 R85	57-11-34-73 57-11-31-52 57-11-31-54 57-11-3102 57-11-3104	47 kChm 1.5 kChm 150 kChm 1 kChm 1 D0 kChm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		62 62 62 62	00 57-11-310 01 57-11-368	3 10 kOhn 2 6-8 kOhn 2 6-8 kOhn	13+ 0-25W+ MF 13+ 0-25W+ MF 13+ 0-25W+ MF 13+ 0-25W+ MF 13+ 0-25W+ MF	
C105 C106 C107 C108	59.06.0683 59.22.3470 59.22.3470	22 pF 68 nF 41 uF 41 uF	101 50V Cer 101 50V PETP -201 10V EL -201 10V EL	MP12 MP13 MP14 MP15 MP10	1.010.013.22 50.20.2002 43.01.0103	2 pcs 2 pcs 4 pcs 1 pcs	Rivet Nut M3#3 Clip+ T0126 ESE Warning Label	31			57-11-3104 57-11-3103 57-11-3682 57-11-3103	24 kOhm 10 kOhm 6-8 kChm 10 kOhm	1%, 0-25%, MF 1%, 0-25%, MF 1%, 0-25%, MF 1%, 0-25%, MF		62 62 82	04 05 57•11•318 06 57•11•358	1 180 Ohn 2 5+6 kOhn	not used 12+ 0-25W MF 12+ 0-25W MF 12+ 0-25W MF	
C110 C111 C112	59.06.0104 59.34.5391 59.22.3470 59.22.3470 59.08.0222	21 uF 18 nF 15 nF 10 uF 3-3 nF 41 uF 41 uF 41 uF 41 uF 41 uF 41 uF 41 uF 41 uF 42 uF 43 uF 44 uF 47 uF 47 uF 47 uF 47 uF 47 uF 47 uF 47 uF	101 50V Cer -201 10V EL -203 10V EL 101 50V PETP	P1 P2 P3	54.01.0223 54.01.0261 54.01.0273 54.01.0261	7-Pole 20-Pole 13-Pole 20-Pole	CIS Pin Strip CIS Pin Strip CIS Pin Strip CIS Pin Strip			R99 R90 R91 R92 R93 R94	57-11-3682 57-11-3683 57-11-3752 57-11-3562	6+8 kOhm 68 kOhm 7+5 kOhm 5+6 kOhm 100 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		R2 R2	08 57-11-368 09 57-11-333 10 57-11-333	3 33 kOhn 3 33 kOhn	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF	
C113 C114 C115 C116 C117	59.00.0222 59.34.5471 59.22.3470 59.22.3101 59.22.3470 59.22.3470 59.00.0153	470 pF 47 uF 100 uF 47 uF	-201 107 EL   107 Sept   108 Sept   109 Sept	P4			net ured			R 96 R 97	57.11.3432 57.11.3432 57.11.3432	4.3 kOhm 4.3 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF not used		f2 f2 f2	12 57-11-31: 13 57-11-35: 14 57-11-31: 15 57-11-36:	0 56 0hn 1 100 0hn 2 6-8 k0hn	12. 0-25W, MF 12. 0-25W, MF 12. 0-25W, MF 13. 0-25W, MF	
C116 C119 C120 C123	59.22.3470 59.06.0153 59.25.5471 59.22.8479	47 uF 15 nF 470 uF 4-7 uF	And tuesd of the control of the cont	Q5 Q6 Q8 Q8 Q9	50.03.0515 50.03.0353 50.03.0435 50.03.0515 50.03.0436	EC3078 J112 EC2378 EC3078 EC2378	BC5578, BC5608 PNP FET BC5478, BC5508 PNP BC5478, BC5608 PNP BC5478, BC5608 PNP	Hot		R99 R100 R101 R102	57.11.3472 57.11.3223 57.11.3103 57.11.5335	4.1 kOhm 22 kOhm 16 kOhm 3.3 MOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 5%, 0.25%, MF		62 62 62	16 57-11-368 17 57-11-368 18 57-11-515		1%, 0.25%, MF 1%, 0.25%, MF 5%, 0.25%, MF 1%, 0.25%, MF, with socket	
STUDER (O			LECTR. EOARD 2/2 VUK HS 1.727.467.00 PAGE 3				ECTR. BOARD 2/2 WUK HS 1-727-467-0	00 PAGE 6	SIU	DER (O	1) 88/02/16 GP	AUDID EL	ECTR - BOARD 2/2 VUK HS 1.721-467	0) PAGE 9	STUDER	[00] 88/02/16	GP AUBIO E	LECTR. BOARD 2/2 VUK HS 1.727.467.	00 PAGE 12



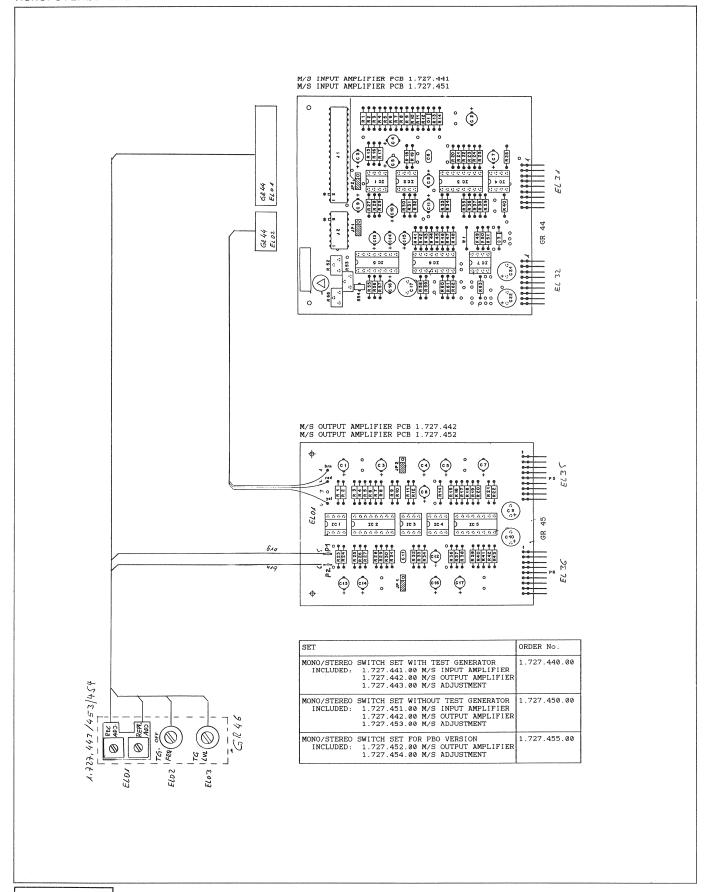
# AUDIO ELECTRONICS VUK (2 VU/HS) 1.727.467.00 GRP41/42

ND.	P05.N0.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.		POS • NO •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANU
	R • • • 220 R • • • 221 R • • • 222	57.11.3222 57.11.3392	2.2 kOhm 3.9 kOhm	1%, 0.25W, MF not used 1%, 0.25W, MF			XIC13 XIC14 XIC15	53.03.0166 53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	R 223	57.11.3563 57.11.3682	56 kOhm 6-8 kOhm 39 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC 16 XIC 17	53.03.0168 53.03.0168 53.03.0168	16-Pole 16-Pole 16-Pole	IC Socket IC Socket IC Socket	
	R225 R226 R227	57.11.3393 57.11.3822 57.11.3473	8.2 kOhm 47 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF			XIC18 XIC19 XIC20	53.03.0166 53.03.0166	8-Pole 6-Pole	IC Socket IC Socket	
	R • • • 228 R • • • 229 R • • • 230	57.11.3563 57.11.3562 57.11.3683	56 kOhm 5.6 kOhm 68 kOhm	1%, 0.25W, MF 1%, 0.25W, MF			XIC21 XIC22 XIC23	53.03.0166 53.03.0166 53.03.0165	8-Pole 8-Pole 20-Pole	IC Socket IC Socket IC Socket	
	R231 R232 R233	57.11.3333 57.11.3333 57.11.3103	33 kOhm 33 kOhm 10 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF			XIC24 XIC25 XIC26	53.03.0166 53.03.0166 53.03.0168	8-Pole 8-Pole 16-Pole	IC Socket IC Socket IC Socket	
	R • • • 234 R • • • 235 R • • • 236	57.11.3271 57.11.3273 57.11.3152	270 Ohm 27 kOhm 1.5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF			XIC 27	53.03.0166	8-Pole	IC Socket	
	R • • • 237 R • • • 238 R • • • 239	57.11.3331 57.11.3103 57.11.3103	330 Ohm 10 kOhm 10 kOhm	1%, 0.25W. MF 1%, 0.25W. MF							
	R • • • 240 R • • • 241 R • • • 242	57.11.3102 57.11.3472	i kOhm 4.7 kOhm 47 kOhm	1%, 0.25W, MF not used 1%, 0.25W, MF 1%, 0.25W, MF							
	R 243 R 244 R 245	57.11.3473 57.11.3102 57.11.3222 58.01.8502	1 kOhm 2•2 kOhm 5 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, PMG							
	R • • • 246 R • • • 247 R • • • 248 R • • • 249	57.11.3021 57.11.3392	820 Ohm 3•9 kOhm	1%, 0.25%, MF 1%, 0.25%, MF not used		C	Ceramic	51 - 51-04	ludio DET	P = Polyester	
	R • • • 250 R • • • 251 R • • • 252	57.11.3153 57.11.3473 57.11.3472	15 kUhm 47 kOhm 4•7 kOhm	1%; U-25W; MF 1%; U-25W; MF 1%; U-25W; MF		PP =	Polypropyle	en MF = Metal F	12 mli	= Silicon	
	R • • • 253 R • • • 254	57-11-3472 57-11-3472 57-11-3331 57-11-3102	4.7 kOhm 330 Ohm 1 kOhm	1% 0 0 2 5 W + FF 1% 0 2 5 W + MF 1% 0 2 5 W + MF		MANUE	NS Sig	<pre>( = Analog Devic = National Sem g = Signetics</pre>	iconductors	Ra = Raytheon St = Studer	
Ŧ	R *** 255 R *** 256	57.11.3102 57.11.3273	27 kOhm	1%, 0.25%, MF 1%, 0.25%, MF ECTR. BOARD 2/2 VUK HS 1.727.467.00	2 2455 13		88/02/16	)) 88/02/16 GP	WOTO SI	ECTR. BOARD 2/2 VUK HS 1.727.467.00	0.455
	D R (01	5, 88,02,18 GP	AUDIO EL	ECTR. BOARD 2/2 VOK RS 1:727-407-00	, PAGE 13	3 1 0	DEK (00	,, 80,02,110 GP	AODIO EC	ECIN. BORNO 2/2 VON H3 12/2/440/2000	rade
	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.						
	R • • • 257 R • • • 258 R • • • 259	57.11.3102 57.11.3471 57.11.3103	1 kOhm 470 Ohm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R260 R261 R262	57.11.3221 57.11.3221 57.11.3122 57.11.3471	220 Ohm 1.2 kOhm 470 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF							
	R263 R264 R265	57.11.3471 57.11.3223 57.11.3222 57.11.3473	22 kOhm 2.2 kOhm 47 kOhm	1%+ 0+25W+ MF 1%+ 0+25W+ MF 1%+ 0+25W+ MF							
	R266 R267 R268	57.11.3103 57.11.3682 57.11.3682	10 kOhm 6.8 kOhm 6.8 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R • • • 269 R • • • 270 R • • • 271	57•11•3103 57•11•3472 57•11•3122	10 kOhm 4.7 kOhm 1.2 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R • • • 272 R • • • 273 R • • • 274	57.11.3223 57.11.3223 57.11.3473	22 kOhm 22 kOhm 47 kUhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R275 R276 R277	57.11.3223 57.11.3103 57.11.3339	22 kOhm 10 kOhm 3•3 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R • • • 278 R • • • 279 R • • • 280	57.11.3103 57.11.3103 57.11.3339	10 kOhm 10 kOhm 3•3 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF							
	R 281 R 282 R 283	57.11.3222 57.11.3222 57.11.3339	2.2 kOhm 2.2 kOhm 3.3 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF							
	R • • • 284 R • • • 285 R • • • 286	57-11-3103 57-11-3103 57-11-3339	10 kOhm 10 kOhm 3.3 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF							
	R • • • 287 R • • • 288 R • • • 289	57.11.3472 57.11.3103 57.11.3471	4.7 kOhm 10 kOhm 470 Ohm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF							
	R290 R291 R292	57.11.3391 57.11.3152 57.92.1151	390 Ohm 1.5 kOhm 18 Ohm	1%, 0.25W, MF 1%, 0.25W, MF 150mA, PTC							
ΤU	R • • • 293 D E R (0	57.11.3180 0) 88/02/16 GP	18 Ohm AUDIO EL	1%, 0.25W, MF ECTR. BOARD 2/2 VUK HS 1.727.467.00	0 PAGE 14						
	POS • NO • R • • • 294	PART NO. 57-11-3470	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.						
	R295 R296 R297	57.11.3223 57.11.3105 57.11.3472	22 kOhm 1 MOhm 4.7 kOhm	1%; 0.25W; MF 1%; 0.25W; MF 1%; 0.25W; MF							
	T 2 T 3 T 4 T 5 T 6	1.022.451.00 1.022.271.00 1.022.272.00 1.022.402.00 1.022.355.00	1:0.62	Line Input Trafo Erase Trafo Bias Trafo Sync Trafo Line Output Trafo	5t St St St						
	TP2 TP3 TP4	54.02.0320 54.02.0320 54.02.0320 54.02.0320		Plug 2-8¢0-8 Plug 2-8¢0-8 Plug 2-8¢0-8 Plug 2-8¢0-8	AMP AMP AMP AMP						
	TP6 TP7	54.02.0320 54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP AMP						
	W3 W4	64.01.0106 64.01.0106		Wire Bridge Wire Bridge							
	W5 W6 W7 W8	64.01.0106 64.01.0106 64.01.0106		Wire Bridge not used Wire Bridge Wire Bridge							
	XIC 2 XIC 3 XIC 4	53.03.0166 53.03.0168 53.03.0166	8-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket							
	XIC6 XIC7	53.03.0166 53.03.0166 53.03.0166	8-Pole d-Pole 8-Pole	IC Socket IC Socket IC Socket							
	XIC9 XIC9	53.03.0168 53.03.0166 53.03.0166	16-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket							
	XIC11	53.03.0165	20-Pole 16-Pole	IC Socket IC Socket							

# MONO/STEREO SWITCH BLOCK DIAGRAM (WITH TEST GENERATOR)

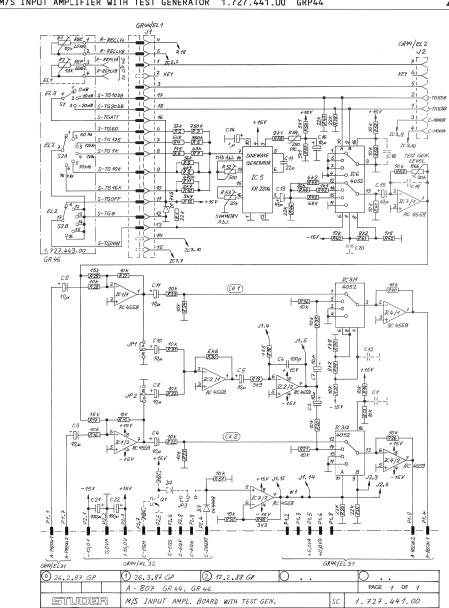


## MONO/STEREO SWITCH WIRING DIAGRAM





#### M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44

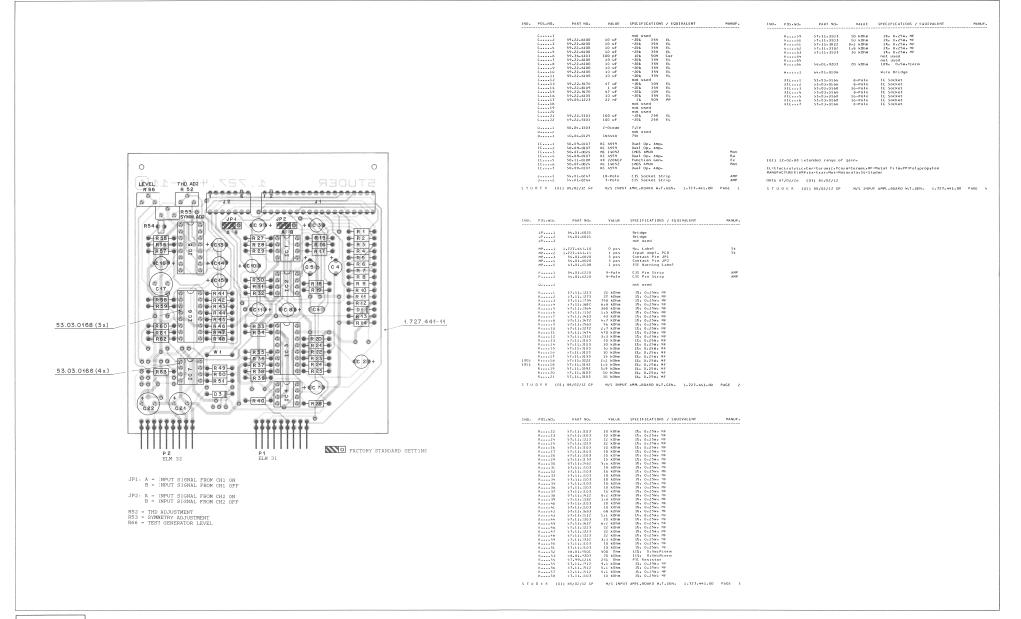


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STUDER A807 7/118

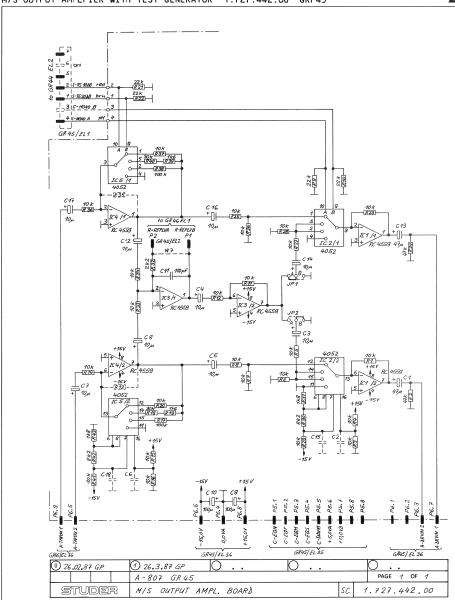


#### M/S INPUT AMPLIFIER WITH TEST GENERATOR 1.727.441.00 GRP44



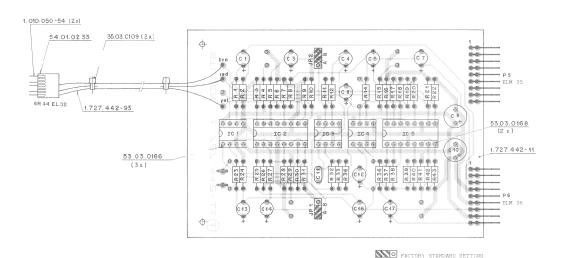


M/S OUTPUT AMPLFIER WITH TEST GENERATOR 1.727.442.00 GRP45





M/S OUTPUT AMPLFIER WITH TEST GENERATOR 1.727.442.00 GRP45



JP1: A = MONO OUTPUT SIGNAL PRESENT ON CH1 B = NO MONO OUTPUT SIGNAL ON CH1

JP2: A = MONO OUTPUT SIGNAL PRESENT ON CH2
B = NO MONO OUTPUT SIGNAL ON CH2

			SPECIFICATIONS / EQUIVALENT	HANUF
	59.22.3470			
Connect	59+22+3470	47 uF	-201 10V EL	
C			not used	
	59+22+6100	10 uF	-201 35V EL	
C 5		13 ur	-201 35V EL	
	59 - 22 - 6100	10 uF	-201 35V EL	
C * * * * * 6			not used	
C 7	59-22-6100	10 uf	-201 35V EL	
C 8	59+22+6100	10 uf	-201 35V EL	
C9	59.22.5101	10) uf	-201 25V EL	
C++++10		100 uF	-201 25V EL	
C 11		100 pf	101 50V Cer	
C++++12	59 + 22 + 61 0 0	10 uF	-201 35V EL	
C13		47 UF	-201 10V EL	
C14	59+22+6100	10 UF	-201 35V EL	
C 15			not used	
C = = = 10		1) uF	-201 35V EL	
C++++17	59 + 22 + 61 00	10 uf	-201 .35V EL	
C 18			not used	
IC1	50.09.0107	RC 4559	Bual Op. Amp.	
IC ** * *2	50.07.0024	MC 14012	ENOS AMUX	Not
10 ****3	10.09.0107	RC 4559	Dual Op. Amp.	
I C 4	50-09-0107	RC 1559	Dual Op. Amp.	
10 *** *5	50 - 07 - 0024	MC 14052	CHOS AMUX	Mot
JP L	54 + 01 + 002 1		Bri4ge	
JP ** * * 2	54.01.0021		ðridge	
	1.727.442.10	0 pcs	No+ Label	St
MP - + + + C	1+727+442-93	Lpcs	Hiring List	St
MP 3	1.327.442.11	Locs	Output Ampl. PCB	St
MP ** * * 9	54.01.0020	3 pcs	Contact Pin JP1	
MP 5	54 - 01 - 0020	3 pcs	Contact Pin JP2	
MP 6	54 + 01 + 0233	1 065	I-Pole Cis Pin Case	AMP
MP T	93 a D1 a O1 O8	l pcs	ISE Marning Label	
MP ** * * B	1-727-992-01	0 pcs	Text Label	

	P05+N0+	PERT NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
(01)	Persont	54+02+0320	2 .8 .0 . 8	Contact oin	AMP
(01)	P * * * * * 2	54.02.0320	2 + 8 + 0 + 8	Contact pin	AMP
(00)	P 5	54.01.0223	7-Pole	CIS Pin Strip	AMP
	P *** * *5	54 + 01 + 022 0 54 + 01 + 022 3	9-Pole	CIS Pin Strip	AMP
				CIS Pin Strip	AMP
(01)	P *** * *0	54-01-0220	9-Pole	C1S Pin Strip	AMP
	Reseast	57 - 11 - 9103	LO kOhm	2%+ 0+25H+ MF	
	R = + = + 2	57+11+4473	47 kOhm	2%+ 0.25H+ MF	
	R = 1 = = 3	57-11-4103	10 kOhm	2% 0.25H MF	
	R + + + + + 4	57 - 11 - 410 3		2% 0.25H MF	
	R = + = + = 5	>7.11.4103		2%, 0.25W, MF	
	R+++++b	57.11.4103		2% 0.25H o MF	
	R T	57.11.4103		2%+ 0-25H+ HF	
	R = + = = + B	57.11.4103	10 kOhm	2% 0.25M MF	
	R = = = 10	57 - 11 - 4223	22 kOhm	2% 0.25W HF 2% 0.25W HF	
	Reseall	57 - 11 - 422 3 57 - 11 - 410 3	22 kOhm 10 kOhm	2% 0-25W MF 2% 0-25W MF	
	8 12	57-11-4103	10 kOhn	2% 0.25W MF	
	8 13	)   +     1   +	10 Kunn	not used	
	B = 1 = 1 1 5	57-11-3103	10 kOhm	1% 0.25W+ MF	
	Bernelli	57-11-9103	10 kOhn	2% 0.25W MF	
	K = = = 10	57-11-9103	10 kOhn	2% 0-25W MF	
	Barrel7	57 - 11 - 3104	100 k0hm	12. 0.25W. MF	
	8 18	57+11+3303		1% 0 - 25W - MF	
	Bases 19		1+6 k0hm	14. 0.25W. MF	
	R = + = = 2D	57 = 11 = 31 D 3	10 kDhm	13+ 0+25W+ MF	
	R = = = 21	57 - 11 - 4223	22 kOhm	2% 0.25Ha ME	
	R * * * * 22	57-11-4223		2% 0 . 25 H . MF	
	R = = = 23	57-11-4103	10 kOhm	2% 0.25H: MF	
	R + + + 24	57-11-4973	47 kOhm	2%+ 0=25W+ MF	
	R = = = 25	57-11-4103	10 kOhm	2% 0.25H MF	
	R = + + 26	:7+11+4103	10 kOhm	2%+ 0=25W+ MF	
	8 27	57 - 11 - 4103	10 kOhm	2%+ 0+25W+ MF	
	R + + + + 28	57-11-4103	10 kOhm	2%, 0.25W, MF	
			10 kOhm	2%, 0.25W, MF	
	R * * * * 30	57-11-4322	8 • 2 kOhm	2%, 0.25W, MF	
s r u	0 E R (OL	) 67/03/25 Wth	M/S QUTPUT	F AMPL - BOARD 1 - 727 - 442	OD PAGE 2

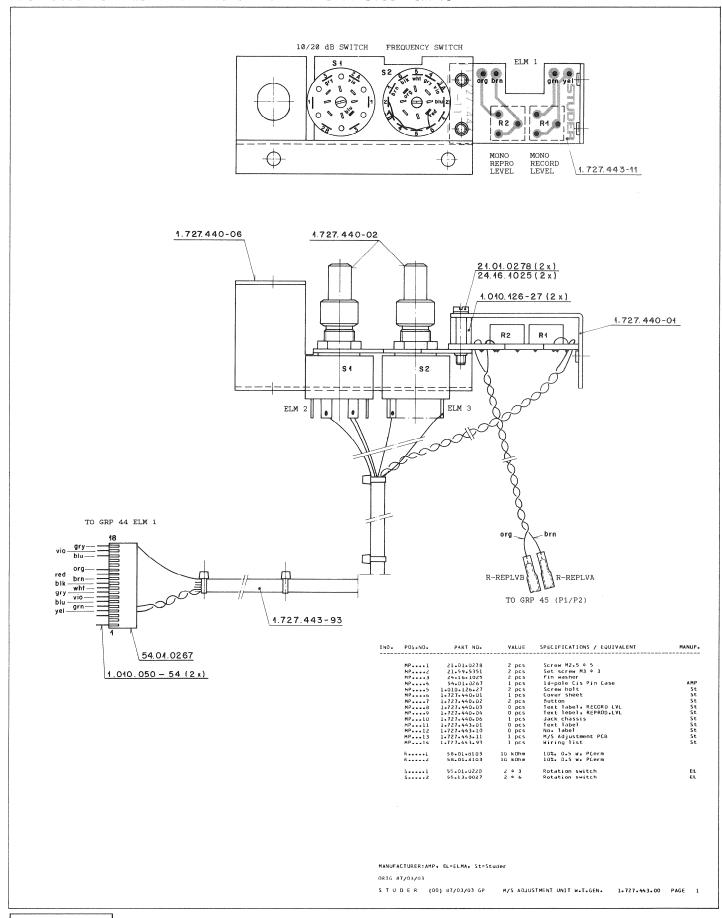
INO.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF
	R 11	57.11.4182	1.8 kDhm	2%+ 0.15N+ MF	
			2 + 2 kOhm		
	R 33	57.11.4103	Lu k0hm	2%, 0.25W, MF	
		57.11.4103	10 kOhm	2% 0.25H MF	
	R * * * * 35			not used	
			LC kOhm	14. 0.25H, MF	
			10 kDhm	1%+ 0+25H+ MF	
			10G k0hm	11, 0.25W, MF	
		57-11-3162			
				1%, 0.25W, MF	
		57-11-4103			
				2%, 0.25W, MF	
	8 *** * 43	57-11-4162	1 + 0 kOhm	2%+ 0+15W+ MF	
	W * * * * * 7			not used	
			8-Pole	IC Socket	
			L6-Pole		
		53.03.0166			
	X16+++4	53.03.U166	8-Pole		
	X [ ( 5	53.03.0168	La-Pole	IC Socket	

ORIG 87/02/26 (01) 81/03/26

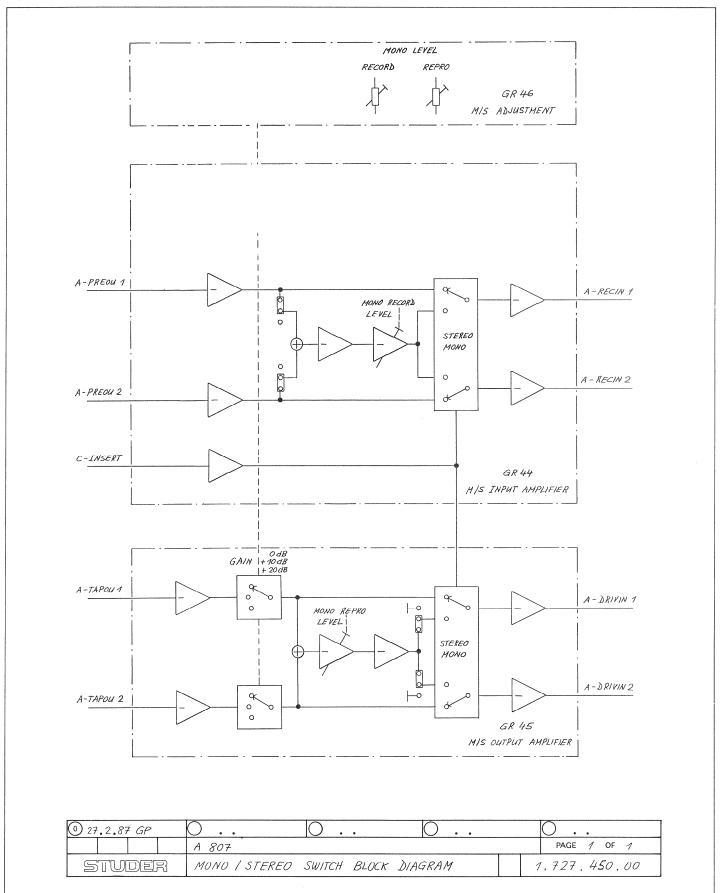
S T U O E R (D1) 37/03/26 With M/S BUTPUT AMPL. BOARD

1.727.442.00 PAGE 3

## M/S ADJUSTMENT WITH TEST GENERATOR 1.727.443.00 GRP46

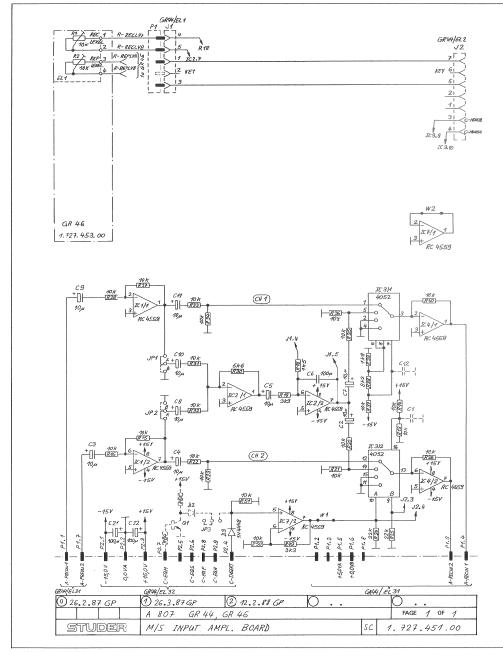


## MONO/STEREO SWITCH BLOCK DIAGRAM (WITHOUT TEST GENERATOR)





#### M/S INPUT AMPLIFIER 1.727.451.00 GRP44

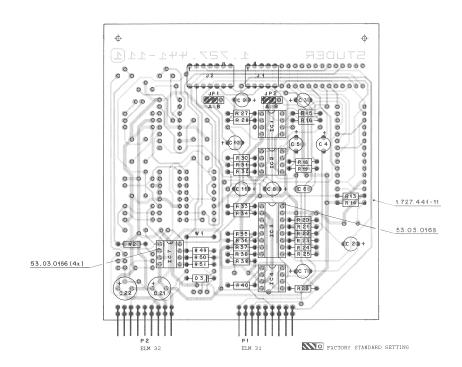


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STUDER A807 7/124



M/S INPUT AMPLIFIER 1.727.451.00 GRP44



JP2: A = INPUT SIGNAL FROM CH2 ON B = INPUT SIGNAL FROM CH2 OFF

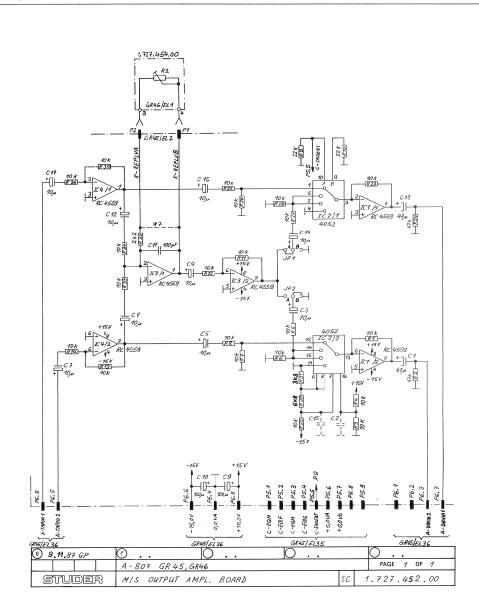
	POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EVO	I VAL ENT	MANUF.
	L 2	59-22-6100	10 uF	-20% 35V EL -20% 35V EL		
	L 3 L 4	59-22-6100	10 uF 10 uF	-207 35V II		
	L 5	59.22.6100	10 uF	-20% 35V SL		
	L 0	59.34.4101	100 pF	-20% 35V SL 10% 50V Cer		
	E 7 E 8	59.22.6100 59.22.6100	10 uF	-20% 35V SL -20% 35V SL		
	[9	59-22-6100		-30% 3.6W TI		
	C10	59-22-6100	10 uF	-20% 35V EL		
	L 21	59-22-6100 59-22-5101	10 uF	-20% 35V EL -20% 25V EL		
	L Z Z	59.22.5101	10 UF 10 UF 100 UF 100 UF	-20% 35V EL -20% 35V EL -20% 25V EL -20% 25V EL		
	D * * * * * 3	50.04.0125	1N4448	75 V		
	10 ****1 10 ****2	50.09.0107	EC 4559 EC 4559	Dual Op. Arp.		
	10 **** 3	50 - 01 - 0024	NC 14052	Dual Op. Amp. CMOS AMUX Dual Op. Amp.		Mot
	1C 7	50.09.0107 50.09.0107	RC 4559 RC 14052 RC 4559 RC 4559	Dual Op. Amp. Dual Op. Amp.		Ra
	J * * * * * 1	54+01+0305	5-Pole 7-Pole	C1S Socket Strip C1S Socket Strip		AMP
	J * * * * * 2	5++01+0244	7-Pole			AMP
	JP 2	5+-01-0021 5+-01-0021		Bridge Bridge		
	MP1	1-727-451-19	0 pcs 1 pcs 3 pcs 3 pcs 1 pcs	No. Label Input Ampl. PC3		St St
	MP2 MP3	1-727-441-11 5+-D1-0020	1 pcs	Input Ampl. PC3 Contact Pin JP1		24
	MP 4 MP 5	54.01.0020 43.01.0108	3 pcs	Contact Pin JP? ESE Warning Lacel		
		54.01.0220				AMP
	P 2	54-01-0220	9-Pole 9-Pole	CIS Pin Strip CIS Pin Strip		AMP
	k13	51-11-3103	10 kDhm	1%, 0.25#, MF		
STUI	D E R (01	) 81/02/12 GP	M/S IMPUT	AMPL . BOARD	1.727.451.00	PAGE 1
IND.	POS.NO.	PART NO.		SPECIFICATIONS / EQ	JIYALENT	MANUF.
	R14	57+11+3103	10 kOhm 10 kOhm	1%. 0.25H, "F		
	R 15 R 16	57.11.3103 57.11.3103	10 kOhm	1%, 0.25W; MF 1%, 0.25W; MF		
(00)	Sec. 18		2.2 kOhm 1.5 kOhm			
011	R 1 6	57 - 11 - 3152	1 + 5 k0hm	1%, 0.25W, 4F		
	K 19 R 2u	57.11.3392 57.11.3103	3.9 k0hm 10 k0hm	1%, D.25W, MF 1%, O.25W, MF		
	R * * * * 21	57 - 11 - 310 3	10 kOhm	13. 0.25W: MF		
	K * * * * 22	57.11.3103 57.11.3103	10 k0hm	17. 0.25W, MF		
			LO kOhm	1% 0 - 25 H + MF		
	K 23	57.11.3103		10 0 15 4		
	R = = = 24	57-11-3223	22 kDtvn	1%, 0.25W, MF		
	R 2 + R 2 5 R 2 0	57 - 11 - 3223 57 - 11 - 3223 57 - 11 - 3103	22 kOhm 22 kOhm 16 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	R 2 5 R 2 5 R 2 I	57-11-3223 57-11-3223 57-11-3103 57-11-3103	22 kOhm 22 kOhm 16 kOhm 10 kOhm	1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF		
	R 25 R 25 R 21 K 28	57-11-3223 57-11-3223 57-11-3103 57-11-3103 57-11-3103	22 kOhm 22 kOhm 16 kOhm 10 kOhm 10 kOhm	13, 0.25W, MF 13, 0.25W, MF 13, 0.25W, MF 13, 0.25W, MF 13, 0.25W, MF		
	R 24 R 25 R 26 R 21 R 28 R 30 R 31	57-11-3223 57-11-3223 57-11-3103 57-11-3103 57-11-3562 57-11-3103	22 kDhm 22 kOhm 16 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm	1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF 1%, 0.25%, MF		
	R26 R26 R21 K28 K30 R31	57-11-3223 57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kDhm 22 kOhm 16 kOhm 10 kOhm 10 kOhm 10 kOhm 10 kOhm	1%, 0.25%, MF 1%, 0.25%, MF		
	R 24 R 25 R 26 R 27 R 28 R 30 R 31 R 31	57-11-3223 57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kDhm 22 kOhm 1G kOhm 1G kOhm 1G kOhm 1G kOhm 1G kOhm 1G kOhm	12, 0.25%, MF 12, 0.25%, MF		
	R 24 R 25 R 26 R 21 R 28 R 30 R 31 R 32 R 33 R 34	57-11-3223 57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kDtvs 22 kOtvs 1G kOtvs 10 kOtvs 10 kOtvs 10 kOtvs 10 kOtvs 10 kOtvs 10 kOtvs 10 kOtvs	12, 0.25%, MF 12, 0.25%, MF		
	R 24 R 25 R 26 R 21 R 28 R 30 R 31 R 32 R 32 R 34 K 35	57-11-3223 57-11-323 57-11-3103 57-11-3103 57-11-362 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kDhm 22 kOhm 1G kOhm 1G kOhm 1G kOhm 1G kOhm 1G kOhm 1G kOhm	12, 0.25%, MF 12, 0.25%, MF		
	R 24 R 25 R 26 R 21 R 30 R 31 R 32 R 34 K 35 R 36 K 36 K 36	57-11-3223 57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kOhran 22 kOhran 16 kOhran 10 kOhran	12, 0.25%, MF 12, 0.25%, MF		
	R 24 R 25 R 20 R 21 K 28 K 30 R 31 R 34 K 35 R 35 R 36 K 31	57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kDhw 22 kOhm 16 kOhm 16 kOhm 10 kOhm	1%, 0.2% MF 1%, 0.		
	R 25 R 25 R 26 R 27 R 28 R 30 R 31 R 34 R 35 R 36 R 31 R 31 R 34 R 35 R 36 R 36 R 37 R 36 R 36 R 37 R 36 R 36 R 37 R 36 R 37 R 38 R 39 R 30 R 30 R 30 R 31 R 31 R 31 R 34 R 35 R 36 R 36 R 37 R 36 R 36 R 37 R 36 R 37 R 36 R 36 R 37 R 38 R 38 R 39 R 30 R 30	57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kOhran 22 kOhran 16 kOhran 10 kOhran	12, 0.25%, MF 12, 0.25%, MF 12, 0.25%, MF 13, 0.25%, MF		
	R 24 R 25 R 26 R 27 R 28 R 31 R 31 R 32 R 33 R 34 K 35 R 36 K 36 K 37 R 38 K 38 K 39 K 38 K 38 K 39 K 38 K 39 K 38 K 39 K 38 K 39 K 30 K 31 K 34 K 35 K 36 K 36 K 36 K 37 K 38 K 38 K 38 K 38 K 39 K 39 K 30 K	57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 k Ohm 1.5 k Ohm 1.6 k Ohm 1.0 k O	12, 0.25%, MF		
	R 24 R 25 R 26 R 27 R 28 R 30 R 31 R 32 R 34 K 36 K 31 K 34 K 36 K	57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kOhra 22 kOhra 16 kOhra 10 kOh	12, 0.25%, MF 12, 0.25%, MF		
	R 25 R 25 R 26 R 27 R 28 R 31 R 31 R 32 R 34 K 35 R 35 R 36 R 37 R 38 R 39 R 30 R 30	57-11-3223 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103 57-11-3103	22 kOhm 1G kOh	1x, 0.25%, MF 12x, 0.25%, MF		
	R - 29 R - 25 R - 20 R - 26 R - 27 K - 28 K - 32 R - 31 R - 32 R - 33 K - 35 K - 35 K - 35 K - 36 K - 36 K - 36 K - 37 K - 39 K - 30 K - 31 K - 35 K - 36 K - 36 K - 37 K - 36 K - 37 K - 37 K - 37 K - 37 K - 38 K - 39 K - 39	57-11-3223 57-11-3223 57-11-3103	22 k Ohm 22 k Ohm 16 k Ohm 16 k Ohm 16 k Ohm 16 k Ohm 10 k Ohm	13, 0.25%, MF 13, 0.25%, MF 14, 0.25%, MF 13, 0.25%, MF 15, 0.25%, MF 15		
	R 24 R 25 R 26 R 27 K 28 K 28 K 30 R 31 R 34 K 35 K 36 K 36 K 37 K 39 K 30 K	57-11-3223 57-11-3103 58-91-0106	22 k Ohm 22 k Ohm 16 k Ohm 16 k Ohm 16 k Ohm 16 k Ohm 10 k Ohm	13, 0.25%, MF 13, 0.25%, MF 14, 0.25%, MF 13, 0.25%, MF 15, 0.25%, MF 15		
	R - 29 R - 25 R - 20 R - 26 R - 27 K - 28 K - 32 R - 31 R - 32 R - 33 K - 35 K - 35 K - 35 K - 36 K - 36 K - 36 K - 37 K - 39 K - 30 K - 31 K - 35 K - 36 K - 36 K - 37 K - 36 K - 37 K - 37 K - 37 K - 37 K - 38 K - 39 K - 39	57-11-3223 57-11-3223 57-11-3103	22 k Ohns 22 k Ohns 16 k Ohns 16 k Ohns 10 k Ohns	1x, 0.25%, MF		
S T U	R	57-11-3223 57-11-3223 57-11-3103	22 k Ohm 22 k Ohm 16 k Ohm 10 k Ohm 11 k Ohm 11 k Ohm 12 k Ohm 14 k Ohm 14 k Ohm 14 k Ohm 15 k Ohm 16 k Ohm 16 k Ohm 16 k Ohm 17 k Ohm 18	12. 0.25% MF 13. 0.25% MF 13. 0.25% MF 13. 0.25% MF 13. 0.25% MF 14. 0.25% MF 15. 0.25% MF 16. 0	1+727+151+00	PAGE 2
S T U	R - 25 K - 25 R - 26 R - 26 R - 27 R - 32 R - 32	77-11-3223 77-11-3227 77-11-3203 77-11-3103	22 k Dras 22 k Obras 10 k Obras 1	12. 0.25% MF 13. 0.25% MF 13. 0.25% MF 13. 0.25% MF 13. 0.25% MF 14. 0.25% MF 15. 0.25% MF 16. 0		PAGE Z

EL=tlectrolytic+Cer=Ceramic+Pcerm=Cermet+MF=Metal Film+PP=Pelypropyler MANUFACTURER:AMP+Ex=Exar+Mot=Motorold+St=Studer

S T U D E R (01) 89/02/12 GP M/S INPUT AMPL. BOARD 1.727.451.00 PAGE 3



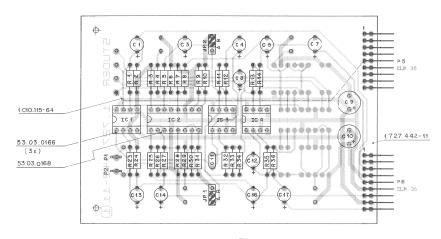
M/S OUTPUT AMPLIFIER PBO 1.727.452.00 GRP45



STUDER A807 7/126



#### M/S OUTPUT AMPLIFIER PB0 1.727.452.00 GRP45



JP1: A = MONO OUTPUT SIGNAL PRESENT CN CH1 B = NO MONO OUTPUT SIGNAL ON CH1

JP2: A = MONO OUTPUT SIGNAL PRESENT ON CH2 B = NO MONO OUTPUT SIGNAL ON CH2 FACTORY STANDARD SETTING

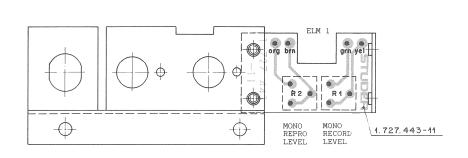
		FART NO.		SPECIFICATIONS / EQ		HA NUF
STU	DER (D	10) ±7/11/39 GP	H/S OUTPI	JT AMPL+ BOARD	1.727.452.00	PAGE .
	×104	53.03.0160	8-Pole	IL Socket		
	X1L 2 X1L 3	53.03.0166 53.03.0166	8-Pale 16-Pale 8-Pale 8-Pale	IC Socket IC Socket IC Socket		
	X10 1	>3.03.01.66	8-Pale	IC Socket		
	R36	>7.11.4103	10 x0hm	21, 0.25H, N:		
	R34 K35	57.11.4103 57.11.4103	10 kOhm 10 kOhm 10 kOhm 10 kOhm 22 kOhm 10 kOh	24, 0.25M, M= 2%, 0.25M, M=		
	R32	57-11-4222	2 • 2 k0hm 10 k0hm	21, 0.25W, M- 21, 0.25W, M-		
	R30	57.11.468? 57.11.4332	6.8 kOhm 3.3 kOhm	2%, 0.25H, MF 2%, 0.25H, MF		
	K++++28 R++++29		10 kühm 10 kühm	2%, 0.25M, M <sup>2</sup> 2%, 0.25M, M <sup>2</sup>		
	R++++26 R+++27	57.11.4103 57.11.4103 57.11.4103	10 kOhn 10 kOhn	24, 0.25H, MF 24, 0.25H, MF		
	R++++24 K+++25	57-11-4473 57-11-4103	47 kOhm 10 kOhm	2%, 0.25%, MF 2%, 0.25%, MF		
	K14	57.11.4103 57.11.4103	10 k0hm 10 k0hm	2%, 0.25%, MF 2%, 0.25%, MF		
	R12	57.11.4103	10 kDhm	21, 0.25H, MF 21, 0.25H, MF		
	R10	57.11.4223	22 k0hm	2%, 0.25%, M= 2%, 0.25%, M= 2%, 0.25%, M=		
	Recess	57.11.4103 57.11.4223	10 k0hm 10 k0hm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	R	57.11.4103 57.11.4103	10 k0hm 10 k0hm 10 k0hm	2%, 0.25%, M= 2%, 0.25%, M= 2%, 0.25%, M=		
	K 9	57.11.4103 57.11.4103	10 k0hm 10 k0hm	2%, 0.25M, M°		
	R2 R3	57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4103 57.11.4223 57.11.4223 57.11.4223 57.11.4103 57.11.4103 57.11.4103 57.11.4103	10 k0hm 47 k0hm	2%, 0.25M, M <sup>2</sup> 2%, 0.25M, M <sup>2</sup> 2%, 0.25M, M <sup>2</sup>		
		PART NO.				
LND.	POS.NO	PART NO	VALUE	SPECIFICATIONS / EQ	TWALENT	NANUE
STU	DER (O	10) 87/11/09 6P	M/S OUTPI	JT AMPL - BDARD	1.727.452.00	P AGE
	P2 P5 P6	54+02+0320 54+02+0320 54+01+0220 54+01+0220	2.800.8 2.800.8 9-Pole 9-Pole	Contact pin Contact pin CIS Pin Strip CIS Pin Strip		AMP AMP AMP
	Mf 7	+3.01.0108				
			0 pcs 150 mm 1 pcs 3 pcs 3 pcs 1 pcs	Contact Pin JP1 Contact Pin JP2		2,6
	MP 2 MP 3	1.727-452-17 1.010-115-64 1.727-442-11 54.01-0020	150 mm	No. Label Hire Output Ampl. PCS		St St
	JP 2	54.01.0021 54.01.0021		Bridge Bridge		
	112 113 114	50.09.0107 50.07.0025 50.09.0107 50.09.0107	NC 14052 RC 4559 RC 4559			Mot
	101					
	C16 C17	59.22.6103 59.22.6103	10 uF 10 uF	not used -20% 15V EL -20% 35V EL		
	C15	59.22.6103	10 uF	-20% 15V EL		
	C12 C13	59.22.6100	10 uF	-20% 35V EL		
	C10 C11	59.22.6100 59.22.6100 59.22.5101 59.22.5101 59.34.4101 59.22.6100 59.22.6100 59.22.6100	10 uF 10 uF 10 uF 10 uF 10 uF 100 uF 100 uF 100 uF 10 uF 10 uF 10 uF	-201 10V EL not used -201 35V EL -201 25V EL -201 25V EL -201 35V		
	C9	59.22.6100 59.22.6100 59.22.6100 59.22.6100 59.22.6100	10 uF 10 uF	-20% 35V EL		
	C5	59.22.6100	10 uF	-20% 35V EL		
	C3	59.22.6100	10 uF	not used -20% 35V EL		
	C1	59.22.3470	47 uF	-20% 10V EL		

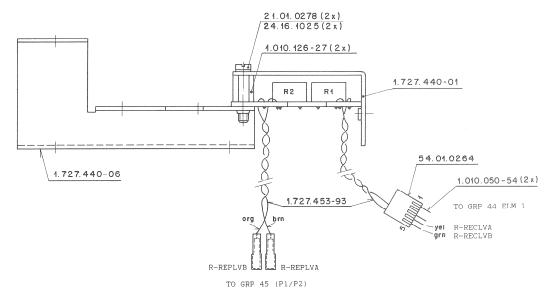
ORIG 87/11/09

S T U D E R (00) 87/11/09 SP M/S OUTPUT AMPL. 80ARD

1+727+452+00 PAGE 3

## M/S ADJUSTMENT 1.727.453.00 GRP46





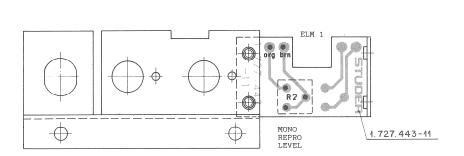
1 ND +	P05-N0-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP1	21.01.0278	2 pcs	Screw M2.5 ≎ 5	
	MP Z	24.16.1025	2 pcs	Fin washer	
	MP 3	54.01.0264	1 pcs	5-pole Cis Pin Case	AMP
	MP 4	1-010-126-27	2 pcs	Screw bolt	St
	MP	1-727-440-01	1 pcs	Cover sheet	St
	MP 6	1-727-440-03	0 pcs	Text label, RECORD LVL	St
	MP 7	1-727-440-04	0 pcs	Text label, REPROD.LVL	St
	MP	1.727.440.06	1 pcs	Jack chassis	St
	MP 9	1.727.443.01	0 pcs	Text label	St
	MP10	1.727.443.11	1 pcs	M/S Adjustment PCB	St
	MP 11	1-727-453-10	0 pcs	No. Label	S.t.
	MP • • • 12	1.727.453.93	1 pcs	Wiring list	St
	R1	58.01.8103	10 k0hm	10%, 0.5 W. PCerm	
	R 2	58.01.8103	10 k0hm	10%, 0.5 W, PCerm	

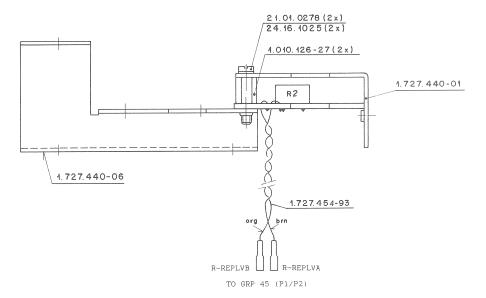
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S T U D E R (00) 87/03/02 GP M/S ADJUSTMENT UNIT

1 • 72 7 • 453 • 00 PAGE 1

# M/S ADJUSTMENT PBO 1.727.454.00 GRP46





I NO .	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	MP 1	21-01-0278	2 pcs	Screw M2+5 ⇒ 5	
	MP Z	24.16.1025	2 pcs	Fin washer	
	MP 4	1 - 010 - 126 - 27	2 pcs	Screw bolt	St
	MP * * * * 5	1.727.440.01	1 pcs	Cover sheet	St
	MP 7	1-727-440-04	0 pcs	Text label, REPROD <sub>*</sub> LVL	St
	MP8	1.727.440.06	1 pcs	Jack chassis	St
	MP 10	1.727.443.11	1 pcs	M/S Adjustment PCB	St
	MP11	1.727.454.10	0 pcs	No. Label	St
	MP12	1-727-454-93	1 pcs	⊮iring list	St
	R *** * 2	58.01.8103	10 kOhm	10%, 0.5 W. PCerm	

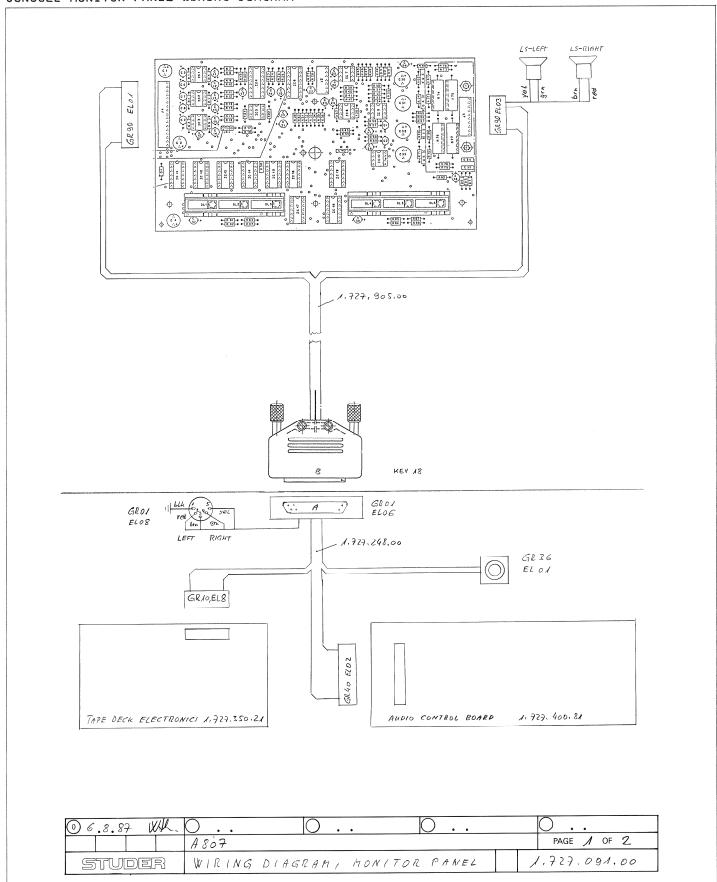
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ORIG 87/11/12

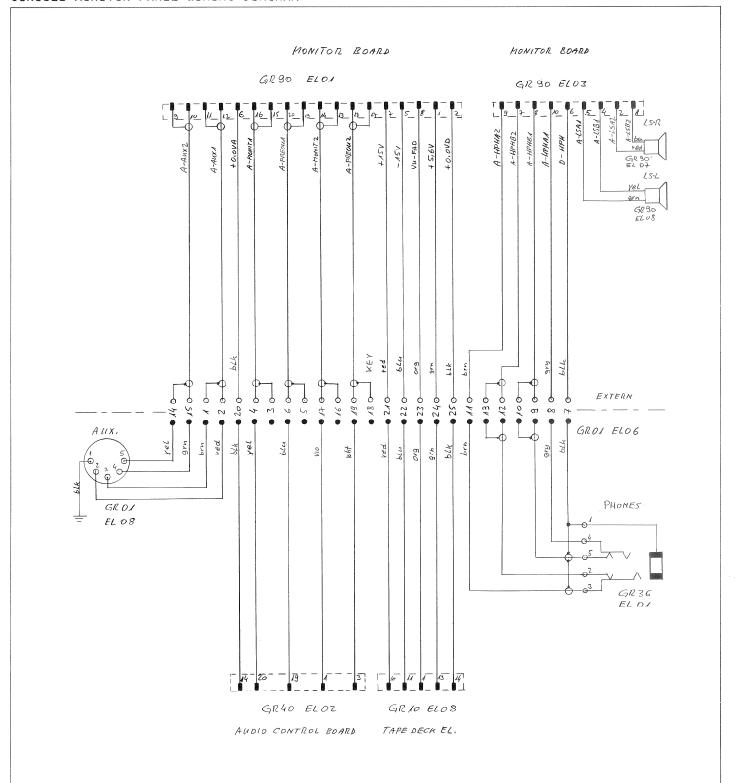
S T U D E R (00) 87/11/12 Hth M/S ADJUSTMENT PBO UNIT

1.727.454.00 PAGE 1

## CONSOLE MONITOR PANEL WIRING DIAGRAM



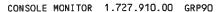
## CONSOLE MONITOR PANEL WIRING DIAGRAM

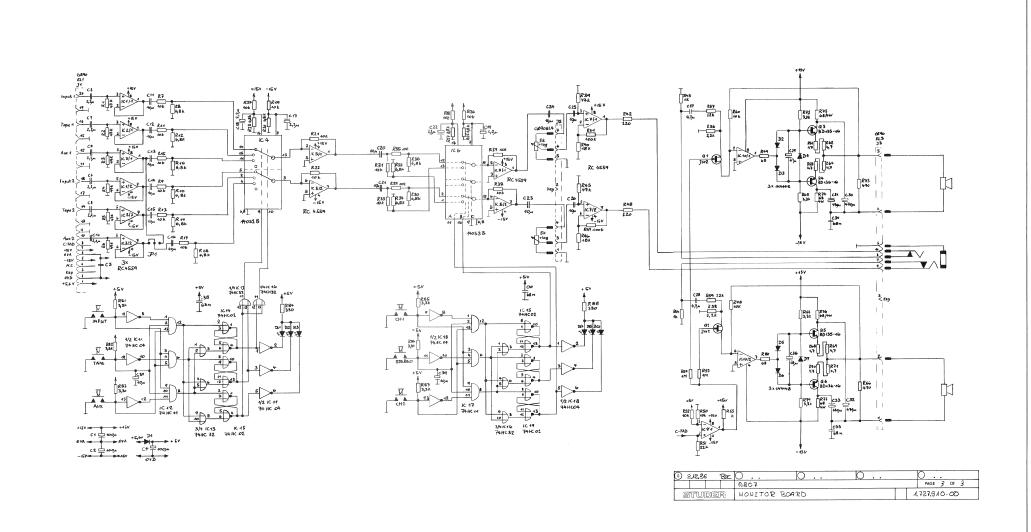


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				A 807				PAGE 2 OF 2
STUDER WILING DIAGRA		IAGRAM, MONI	TOR PAKEL	/	1,727.091.00			

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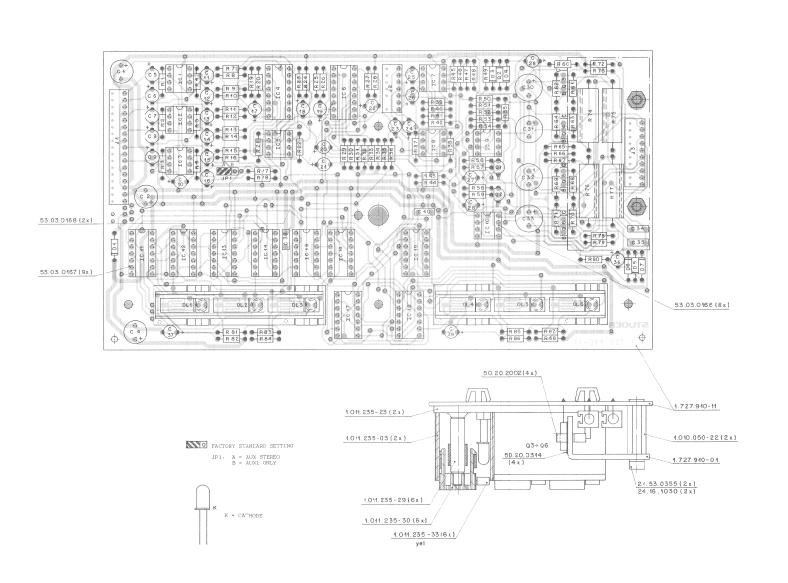




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CONSOLE MONITOR 1.727.910.00 GRP90



IND. P95.40.		VALUE	SPECIFICA: 10NS / E	QUI VAL ENT	MANUF.
C	59.22.5101 59.22.5101	100 uF 100 uF	-20% 25 V EL -20% 25 V EL		
C4 C5	99.22.4101 99.22.4029 90.22.4029 90.22.4029 90.22.4029 90.22.4029 90.22.4029 90.22.4020 90.22.4010	100 uF not used 100 uF 2-2 uF 2-2 uF 2-2 uF 2-2 uF 2-2 uF 2-2 uF 10 uF	-203 20 V U203 20 V V203 30 V V		
C7	59.22.8229 59.22.8229	2.2 uF	-20% 25 V EL -20% 50 V EL		
C9	59.22.8229 59.22.8229 59.22.8229	2.2 UF 2.2 UF 2.2 UF 2.2 UF 10 UF 10 UF 10 UF 10 UF 10 UF 2.2 UF 2.2 UF 10 UF 4.7 UF 4.77 UF 4	-20% 50 V EL -20% 50 V EL -20% 50 V EL		
C11 C12	59.22.6100 59.22.6100	10 uF 10 uF	-20% 50 V EL -20% 35 V EL -20% 35 V EL		
C13	59.22.6100 59.22.6100	10 UF 10 UF 10 UF 10 UF 10 UF 2-2 UF 2-2 UF 2-2 UF 10 UF 2-2 UF 10 UF 4-7 UF 4-7 UF 4-7 UF 4-70 UF	-201 33 V EL  -202 33 V EL  -203 30 V EL  -203 50 V EL  -2		
C15	59.22.6100 59.22.6100	10 UF 10 UF	-20% 35 V EL -20% 35 V EL -20% 50 V EL		
C18 C19	59.22.8229 59.22.8229	2.2 UF 2.2 UF	-20% 50 V EL -20% 50 V EL		
L20 L21	59.22.6100 59.22.6100	10 uF 10 uF	-20% 35 V EL -20% 35 V EL		
C23	59.22.8229 59.22.6100	2+2 UF 10 UF	-20% 35 V EL -20% 50 V EL -20% 35 V EL -20% 35 V EL		
C25	59.22.6100	10 uF	-20% 35 V EL -20% 35 V EL		
C27 C28	59.22.8479 59.22.8479	4+7 UF 4+7 UF	-20% 50 V EL -20% 50 V EL		
C29 C30	59.22.3470 59.22.4471	47 BF 470 BF	-20% 10 V EL -20% 16 V EL		
E32	59-22-447L 59-22-447L	470 BF 470 BF	-20% 16 V E. -20% 16 V EL		
E34 E35	59-06-0683 59-06-0683	oB nF oB nF	-20% 16 V E. 10% 63 V PS 10% 62 V PS		
C36 C37	59-22-3470 59-22-6100	68 mF 47 wF 13 wF	10% 62 V Ps -20% 10 V Et -20% 35 V Et		
	00) 86/07/11 <b>8</b> EC		DARD	1.727.910.00	PAGE 1
IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / E	JUI V AL ENT	4A NU F .
C38 C39 C40	59-06-0683 59-22-6100 59-06-0681	68 mF 10 wF 68 mF	13% 62 V P6 -23% 35 V EU 13% 62 V P1		
C+++40	59-06-0681	68 mF	13% 63 V PE		
01 02 03 04 05	50.04.0512 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125 50.04.0125	1N5818 1N4448 1N4448 1N4448 1N4448 1N4448	30 V 75 V 75 V 75 V 75 V 75 V 75 V		
D	50.04.0125 50.04.0125	1N4448 1N4448	75 V 75 V		
D7	50.04.0125 50.04.0125	1N4448 1N4448	75 V 75 V		
01 1 UL 2	50.04.2500 50.04.2500	MV5352 MV5352	LED yel D=5mm LED yel D=5mm LED yel D=5mm LED yel D=5mm LED yel D=5mm LED yel D=5mm		6 I 6 I
D13 D14	50.04.2500 50.04.2500	MV 5352 MV 5352	LED yel D=5mm LED yel D=5mm LED yel D=5mm LED yel D=5mm LED yel D=5mm LED yel D=5mm		61 61 61
D1 1 D1 2 D1 3 D1 4 D1 5 D1 6	50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500 50.04.2500	MV5352 MV5352 MV5352 MV5352 MV5352 MV5352	LED yel D=5mm LED yel D=5mm		G I
IC1 IC2	50.09.0107	RC 4559 RC 4559	DUAL OP-AMP.		
10	50.07.0024	RC 4559 MC14052	DUAL 9-CH AMUX		
106	50-07-0015	MC 14053	TRIPLE 2-CH AMUK		
1CB 1C9	50.09.010T 50.09.010T	RC 4559 RL 4559	DUAL OP.AMP.		
1010	50.09.0107 50.17.1004	RC 4559 74HC04	MEK INVESTER		
1012	50-17-1002	74HC11 74HC32 74HC52	HER INVESTER TRIP 3-INPUT AND I GUAD 2-INPUT OR GO QUAD 2-INPUT NOR I QUAD 2-INPUT NOR I QUAD 2-INPUT OR GO TRIP 3-INPUT AND I	ATE SATE	
1015	50-17-1002 50-17-1032	74HC02 74HC32	QUAD 2-INPUT NOR I	SATE ATE	
IC2 IC2 IC2 IC3 IC5 IC5 IC5 IC15 IC	50.09.0101 50.09.0101 50.09.0101 90.09.0101 50.09.0101 50.09.0101 50.09.0101 50.09.0101 50.09.0101 50.17.1004 50.17.1011 50.17.1013 50.17.1003 50.17.1003	RC 4559 RC 4559 MC 4559 MC 4559 MC 4559 MC 4559 RC 4560 RC 456	LED Yel D=5mm  DIAL UP_1MP  DIAL UP_1MP  DIAL UP_1MP  DIAL UP_1MP  DIAL V-CH AMUX  DIAL V-CH AMUX  DIAL V-CH AMUX  DIAL UP_1MP  TRIPLE Z-CH AMUX  DIAL UP_1MP  MEX INVERTER  TRIP D-1MPUT AND I  DIAL UP_1MP  DIAL UP_1MP  DIAL UP_1MP  MEX INVERTER  TRIP D-1MPUT AND I  DIAL UP_1MP	SATE	
STUDER (	00) 86/07/11 BEC	MONET OF B	(DAR D	1.727.910.00	PAGE 2
IND. P05.NO.	PART NO.	VALUE	SPECIFICATIONS / E	QUI VAL ENT	MANUF.
1619	50-17-1002	74HC02	NON TURNI-S GAUD	GATE	
J2 J3	54.01.0237 54.01.0263 54.01.0242	20-POLE 7-POLE 10-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip		ARP ARP
J3 J?1		10-PDLE	0.11		ANP
	1.727-910-11	1 ncs	Monitor FCB		
MP 2 MP 3	54.01.0028 1.727.910.01	3 pcs 1 pcs	Contact Pin Kuehlolech		
MP 5	1.011.235.03	2 pcs 2 pcs	Tastengehaeuse 3e Schaltmatte 3er	r	
MPB	1.011-235-29	6 pcs	Drucktaste Kalotte delb		
MP9 MP10	1.727a910a10 53a03a0221	0 pcs 6 pcs	No.Schild LED Socket		
MP11	1.010.050.22 21.53.0355	2 pcs 2 pcs	Distanzbolzen 18m Schrauben M3 <sub>7</sub> 8mm	n	
HP1 HP2 HP3 HP5 HP5 HP5 HP13 HP12 HP12 HP12 HP13 HP14 HP	54-01-0021 1-727-910-11 54-01-0020 1-727-910-01 1-011-235-03 1-011-235-23 1-011-235-30 1-011-235-30 1-727-910-10 53-03-0221 1-01-0-050-22 21-53-035-5 24-16-1030 50-20-2002 50-20-0314	1 pcs 3 pcs 1 pcs 2 pcs 2 pcs 6 pcs 6 pcs 6 pcs 2 pcs 2 pcs 2 pcs 2 pcs 2 pcs 4 pcs	Monitor FCB Contact Pin Kuehlolech Tastengehaeuse 3e Scholtmatte 3er Bülzen Drucktaste Kulotte gelb Motte gelb LED Socket Distanzbolzen 18ms Sicherungsscheibe Transisterranci Liss Isolierscheiben	n	
91	50.03.0350	MPF4392	J112 FET J112 FET		
Q2 Q3	50.03.0350 50.03.0495	MPF4392 8D135-16	J112 FET NPN		
Q1 Q2 Q3 Q4 Q5	50+03+0350 50+03+0350 50+03+0495 50+03+0510 50+03+0495 50+03+0510	MPF4392 MPF4392 BD135-16 BD136-16 BD135-16 BO136-16	J 11.2 FET J 11.2 FET NPN PNP NPN PNP		
R1	57+11+4473	47 kühn	2%, 0.25k, MF		
R2 R3	57-11-4473 57-11-4473	47 k0hn 47 k0hn	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
R 1 R 2 R 3 R 4 R 5 R 6	57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-4473	47 k0hn 47 k0hn 47 k0hn 47 k0hn 47 k0hn 47 k0hn	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		
	00) 86/07/11 8EC	MONITOR B		1+727+910+00	PAGE 3



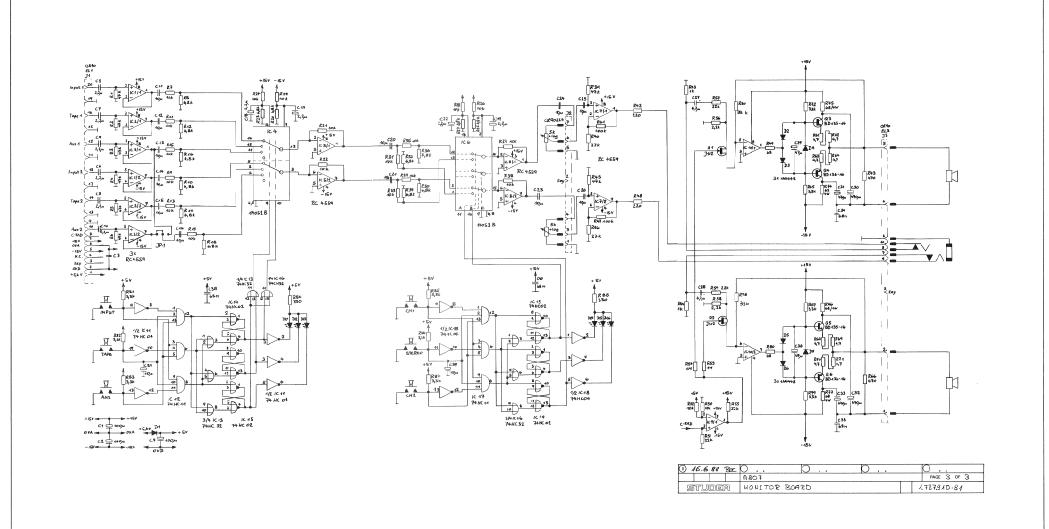
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# CONSOLE MONITOR 1.727.910.00 GRP90

ONSOLE MONTION	1.121.910.00	31(1 7 0		
	IND. POS.NO.	PART NO. VAL	E SPECIFICATIONS / EQUIVALENT	MANUF.
	R8 R9	57-11-4103 10 kl 57-11-4682 6-8 kl 57-11-4103 10 kl	hm 2%, 0-25W, MF	
	R10 R11 R12	57-11-4682 6-8 ki 57-11-4103 10 ki 57-11-4682 6-8 ki	hm 2%, 0∞25₩, MF hm 2%, 0∞25₩, MF	
	R13 R14 R15	57-11-4103 10 ki 57-11-4682 6-8 ki 57-11-4103 10 ki	nhm 2%, 0.25₩, MF nhm 2%, 0.25₩, MF	
	R16 R17 R18	57.11.4682 6.8 kl 57.11.4103 10 kl 57.11.4682 6.8 kl	hm 2%+0-25W+MF hm 2%+0-25W+MF	
	R****19 R****20 R****21	57-11-4103 10 ki 57-11-4682 6-8 ki 57-11-4103 10 ki	hm 2%, 0.25%, MF hm 2%, 0.25%, MF hm 2%, 0.25%, MF	
	R22 R23 R24	57-11-4103 10 kg 57-11-4682 6-8 kg 57-11-4103 10 kg	hm 2%, 0-25W+ MF hm 2%, 0-25W+ MF	
	R25 R27 R28	57-11-4682 6-8 ki 57-11-4103 10 ki 57-11-4682 6-8 ki 57-11-4103 10 ki	hm 2%, 0.25W, MF hm 2%, 0.25W, MF	
	R 29 R 30 R 31	57-11-4103 10 ki 57-11-4682 6-8 ki 57-11-4103 10 ki	hm 2%, 0.25%, MF hm 2%, 0.25%, MF	
	R • • • • 32 R • • • • 33 R • • • • 34	57-11-4682 6-8 kl 57-11-4103 10 kl 57-11-4682 6-8 kl	ከተጠ 2%, 0-25ዛ, MF በተጠ 2%, 0-25ዛ, MF በተጠ 2%, 0-25ዛ, MF	
	K****35 R****36 R****37	57-11-3103 10 ki 57-11-4682 6-8 ki 57-11-4103 10 ki	hm 2%, 0.25W, MF	
	R38 R39 R40	57-11-4103 10 ki 57-11-4473 47 ki 57-11-4183 18 ki	hm 2% 0.25W MF	
	R 41 R 42 R 43	57-11-4104 100 ki 57-11-4221 220 i 57-11-4102 1 ki	hm 2%, 0-25W, MF	
	STUDER (O	0) 86/07/11 BEC MONT	OR BOARD 1.727.910.0	D PAGE 4
	INU - POS-NO-	PART NO- VAL		MANUF-
	R44 R45 R46 R48	57-11-9102 1 k 57-11-9473 47 k 57-11-9483 18 k 57-11-9104 100 k 57-11-9221 220	Dhm 2%, 0.25W, MF Dhm 2%, 0.25W, MF Dhm 2%, 0.25W, MF	
	R48 R49 R50 R51	57-11-4221 220 57-11-4680 68 57-11-4103 10 k 57-11-4223 22 k	Ohm 2%, 0.25W, MF Ohm 2%, 0.25W, MF	
	R • • • • 52 R • • • • 53 R • • • • 54	57-11-4103 10 k 57-11-4105 1 M 57-11-4105 1 M	1hm 2% 0.25% MF 1hm 2% 0.25% MF 1hm 2% 0.25% MF	
	R55 R56 R57	57.11.4223 22 k 57.11.4222 2,2 k 57.11.4223 22 k	Dhm 2%, 0.25₩, MF Dhm 2%, 0.25₩, MF	
	R58 R59 R60	57-11-4222 2,2 k 57-11-4223 22 k 57-11-4103 10 k	Dhm 2%, 0.25₩, MF Dhm 2%, 0.25₩, MF	
	A61 R62 R63 R64	57-11-4479 4-7 57-11-4479 4-7 57-11-4479 4-7 57-11-4479 4-7	Ohm 2%, 0.25W, MF Ohm 2%, 0.25W, MF	
	R65 R66 R67	57-11-4332 3-3 k 57-11-4471 470 57-11-4332 3-3 k	Dhm 2%, 0.25W, MF Dhm 2%, 0.25W, MF	
	R • • • • 68 R • • • • 69 R • • • • 70	57.11.4479 4.7	Dhm 2% 0∘25W MF Dhm 2% 0∘25W MF	
	R72 R72 R73 R74	57-11-4479 4.7 57-11-4332 3.3 k 57-11-4471 470 57-56-5680 68	Dhm 2% 0.25W. MF Dhm 2% 0.25W. MF	
	R75 R76 R77	57.56.5680 68 57.56.5680 68 57.56.5680 68	Dhm 2%, 4 W, DR Dhm 2%, 4 W, DR	
	R••••78 R••••79 R••••80	57-11-4103 10 k 57-11-4332 3-3 k 57-11-4680 68	Dhm 2%, 0.25N, MF Dhm 2%, 0.25N, MF	
	STUDER (O			0 PAGE 5
	IND. POS.NO.	PART NO. VAL		MANUF.
	R81 R82 R83 R84	57-11-4332 3-3 k 57-11-4332 3-3 k 57-11-4332 3-3 k 57-11-4331 330	Ohm 2% 0.25W MF Ohm 2% 0.25W MF	
	к	57-11-4332 3-3 k 57-11-4332 3-3 k 57-11-4332 3-3 k	Ohm 2%, 0.25W, MF Ohm 2%, 0.25W, MF	
	R88 XIC1	57-11-4331 330 54-03-0166 8 Po	Ohm 2%, 0=25W, MF	
	XIL2 XIC3 XIC5	54.03.0166 8 PO 54.03.0166 8 PO 54.03.0168 16 PO 54.03.0166 8 PO	le IC Socket le IC Socket	
	XIC 5 XIC 6 XIC 8	54.03.0166 8 Po 54.03.0166 8 Po 54.03.0166 8 Po	le IC Socket le IC Socket	
	XIC9 XIC10 XIC11	54.03.0166 B Po 54.03.0166 B Po 54.03.0167 14 Po	le IC Socket le IC Socket le IC Socket	
	XIC12 XIC13 XIC14	54-03-0167 14 Po 54-03-0167 14 Po 54-03-0167 14 Po	le IC Socket le IC Socket le IC Socket	
	XIC 15 XIC 16 XIC 17 XIC 18	54.03.0167 14 Po 54.03.0167 14 Po 54.03.0167 14 Po	le IG Socket le IG Socket	
	XIC18 XIC19	54.03.0167 14 Po 54.03.0167 14 Po	le IC Socket le IC Socket	
	EL=Electrolytic, Manufactuker:	PP=Polypropylen• Sl=Si	licon + MF=Metal Film	
	ORIG 86/07/11			
	STUDER (C	U) 86/07/11 8EC MONI	TUK BUARD 1.727.910.6	U MAGE 6
	STUDER (C	0) 86/07/11 BEC MONI	TOR BUARD 1-727-910-6	0 PAGE 6



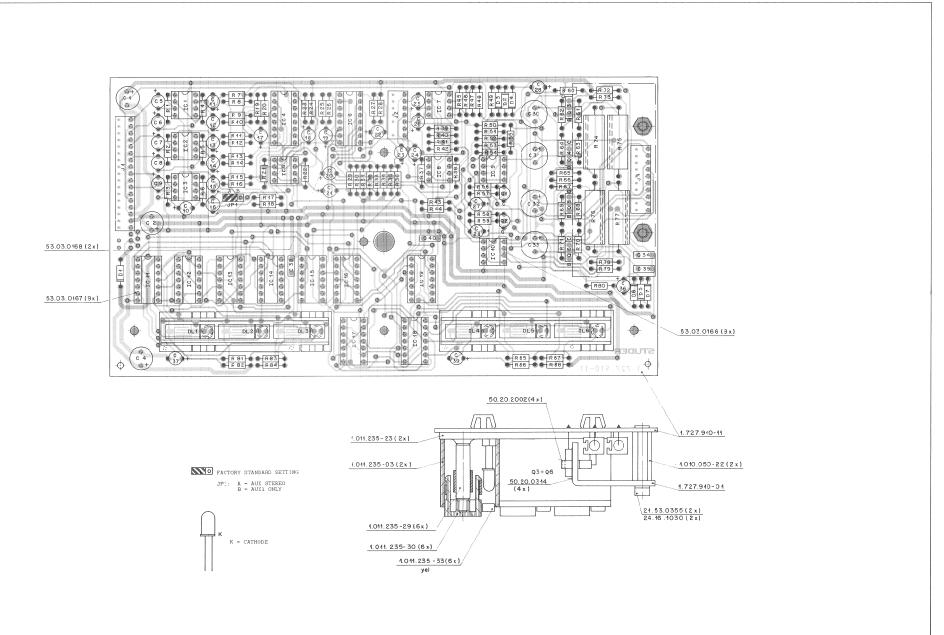




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CONSOLE MONITOR 1.727.910.81 GRP90

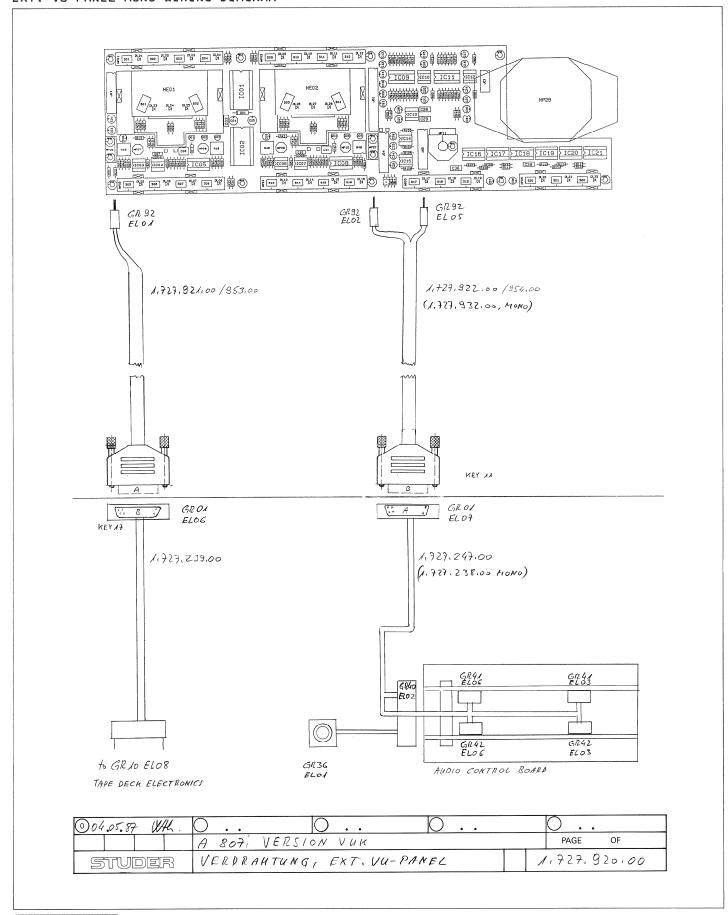




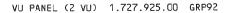
# CONSOLE MONITOR 1.727.910.81 GRP90

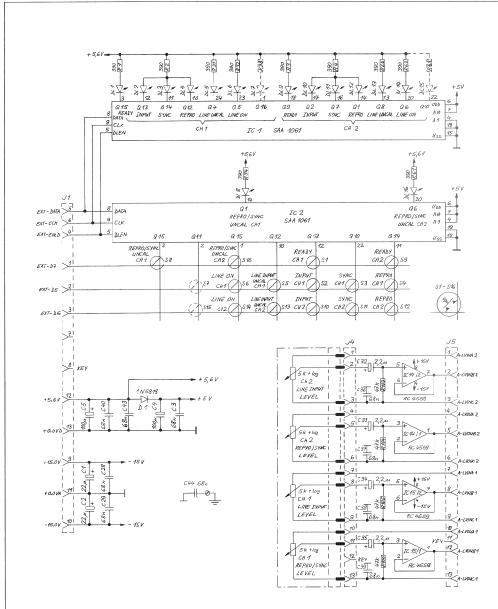
. POS .	NO. PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	I ND .	POS . NO.	PART NO.	VALUE	SPECIFICATIONS /	EQUIVALENT	MAT
C		100 uF	-20% 25 V EL -20% 25 V EL			R7 R8	57.11.3103 57.11.3682	10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
C * * * * * * * * * * * * * * * * * * *	••3 ••4 59•22•5101	not used 100 uF 2.2 uF	-20% 25 V EL -20% 50 V EL			R9 R10 R11	57.11.3682 57.11.3103	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	6 59.22.8229 7 59.22.8229	2.2 uF 2.2 uF 2.2 uF	-20% 50 V EL -20% 50 V EL -20% 50 V EL			R12 R13 R14	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	59.22.8229 10 59.22.8229	2.2 uF 2.2 uF 10 uF	-20% 50 V EL -20% 50 V EL -20% 35 V EL			R15 R16 R17	57.11.3103 57.11.3682 57.11.3103	10 kOhm 6.8 kUhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	59.22.6100 59.22.6100	10 uF 10 uF 10 uF	-20% 35 V EL -20% 35 V EL -20% 35 V EL			R18 R19 R20	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.15 59.22.6100 .16 59.22.6100	10 uF 10 uF 202 uF	-20% 35 V EL -20% 35 V EL -20% 50 V EL			R21 R22 R23	57.11.3103 57.11.3103 57.11.3682	10 kOhm 10 kOhm 6-8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.18 59.22.8229 .19 59.22.8229	2.2 uF 2.2 uF 10 uF	-20% 50 V EL -20% 50 V EL -20% 55 V EL			R24 R25 R26	57-11-3103 57-11-3682 57-11-3103	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25H, MF 2%, 0.25H, MF 2%, 0.25H, MF		
C	.21 59.22.6100 .22 59.22.8229	10 uF 2•2 uF 10 uF	-20% 35 V EL -20% 50 V EL -20% 35 V EL			R 27 R 28 R 29	57.11.3682 57.11.3103 57.11.3103	6.8 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.24 59.22.6100 .25 59.22.6100	10 uF 10 uF 10 uF	-20% 35 V EL -20% 35 V EL -20% 35 V EL			R 30 R 31 R 32	57.11.3682 57.11.3103 57.11.3682	6.8 kOhm 10 kOhm 6.8 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.27 59.22.8479 .28 59.22.8479	4.7 UF 4.7 UF 47 UF	-20% 50 V EL -20% 50 V EL -20% 10 V EL			R 34 R 35	57-11-3103 57-11-3682 57-11-3103	10 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.30 59.22.4471 .31 59.22.4471	470 UF 470 UF 470 UF	-20% 16 V EL -20% 16 V EL -20% 16 V EL			R36 R37 R38	57-11-3682 57-11-3103 57-11-3103	6.8 kühm 10 kühm 10 kühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.33 59.22.4471 .34 59.06.0683	470 uF 68 nF 68 nF	-20% 16 V EL 10% 63 V PE 10% 63 V PE			R40 R41	57-11-3473 57-11-3273 57-11-3104	47 kOhm 27 kΩhm 100 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
C	.36 59.22.3470	47 UF 10 UF	-20% 10 V EL -20% 35 V EL			R • • • • 42 R • • • • 43	57.11.3221 57.11.3102	220 Ohm 1 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
UDER	(00) 88/03/28 Wth	MONITOR	BOARD 1.727.91	0.81 PAGE 1	5 T U	DER (O	0) 88/03/28 Wth	MONITOR E	IO ARD	1.727.910.81	PAGE
• PDS•N	10. PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.	I ND.	P0S+N0+	PART NO.	VALUE	SPECIFICATIONS /	EQUIVAL ENT	MA
C C	39 59.22.6100	68 nF 10 uF 68 nF	10% 63 V PE -20% 35 V EL 10% 63 V PE			R 44 R 45 R 46	57.11.3102 57.11.3473 57.11.3273	1 kOhm 47 kOhm 27 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
D	2 50.04.0125	1N5818 1N4448	30 V 75 V			R 47 R 48 R 49	57.11.3104 57.11.3221 57.11.3680	100 kOhm 220 Ohm 68 Ohm	2% 0-25W NF 2% 0-25W NF 2% 0-25W MF		
D D	50.04.0125 50.04.0125	1N4448 1N4448 1N4448	75 V 75 V 75 V			R 50 R 51 R 52	57-11-3103 57-11-3223 57-11-3103	10 kOhm 22 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
D	7 50.04.0125	1N4448 1N4448	75 V 75 V			R • • • • 53 R • • • • 54 R • • • • 55	57-11-3105 57-11-3105 57-11-3223	1 Mühm 1 Mühm 22 kühm	2%, 0.25W, Mf 2%, 0.25W, Mf 2%, 0.25W, MF		
DL DL	2 50.04.2500 3 50.04.2500	MV5352 MV5352 MV5352	LED yel D=5mm LED yel D=5mm LED yel D=5mm	G I G I G I		R56 R57 R58	57.11.3222 57.11.3223 57.11.3222	2,2 kühm 22 kühm 2,2 kühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
DL DL	•5 50•04•2500	MV5352 MV5352 MV5352	LED yel D=5mm LED yel D=5mm LED yel D=5mm	GI		R * * * * 59 R * * * * 60 R * * * * 61	57.11.3223 57.11.3333 57.11.3479 57.11.3479	22 kOhm 33 kOhm 4.7 Ohm 4.7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
1C	2 50.09.0107	RC 4559 RC 4559 RC 4559	DUAL OP-AMP- DUAL OP-AMP- DUAL OP-AMP-			R * * * * 62 R * * * 63 R * * * 64 R * * * 65	57.11.3479 57.11.3479 57.11.3479 57.11.3332	4.7 Ohm 4.7 Ohm 3.3 kOhm	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF		
IC IC IC	4 50.07.0024 5 50.09.0107	MC 14052 RC 4559 MC 14053	DUAL 4-CH AMUX DUAL OP-AMP- TRIPLE 2-CH AMUX			R 67 R 68	57.11.3471 57.11.3332 57.11.3479	470 Ohm 3.3 kühm 4.7 Uhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
IC	7 50.09.0107 30.09.0107	RC 4559 RC 4559 RC 4559	DUAL OP-AMP- DUAL OP-AMP- DUAL OP-AMP-			R70 R71	57.11.3479 57.11.3479 57.11.3479	4.7 Ohm 4.7 Ohm 4.7 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
IC	.10 50.09.0107 .11 50.17.1004	RC 4559 74HCO4 74HC11	DUAL OP.AMP.  MEX INVERTER  TRIP 3-INPUT AND GATE			R72 R73 R74	57.11.3332 57.11.3471 57.56.5680	3.3 kOhm 470 Ohm 68 Ohm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 4 W, DR		
IC IC	.13 50.17.1032 .14 50.17.1002	74HC32 74HC02 74HC02	QUAD 2-INPUT OR GATE QUAD 2-INPUT NOR GATE QUAD 2-INPUT NOR GATE			R75 R76 R77	57.56.5680 57.56.5680 57.56.5680	68 Ohm 68 Ohm 68 Ohm	2%, 4 W, DR 2%, 4 W, DR 2%, 4 W, DR		
IC IC	.16 50.17.1032 .17 50.17.1011	74HC32 74HC11 74HC04	QUAD 2-INPUT OR GATE TRIP 3-INPUT AND GATE HEX INVERTER			R78 R79 R80	57.11.3333 57.11.3332 57.11.3680	33 kOhm 3.3 kOhm 68 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
	(00) 88/03/28 Wth	MONITOR E	BOARD 1.727.910	D+81 PAGE 2	s T U	DER (O	0) 88/03/28 Wth	MONITOR	SOARO	1 • 72 7 • 910 • 81	PAGE
• POS•h	vO∘ PART NO∘	VALUE	SPECIFICATIONS / EQUIVALENT	MA NU F.	IND.	PD 5 • NO •	PART NG.	VALUE	SPECIFICATIONS /	EQUIVALENT	MA
10		74HC 02	QUAD 2-INPUT NOR GATE			R 81 R 82	57.11.3332 57.11.3332	3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF		
J J	2 54.01.0263	20-POLE 7-POLE 10-POLE	CIS Socket Strip CIS Socket Strip CIS Socket Strip	AMP AMP		R83 R84 R85	57-11-3332 57-11-3331 57-11-3332	3•3 kOhm 330 Ohm 3•3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
JP			Bri dge			R86 R87 R88	57.11.3332 57.11.3332 57.11.3331	3.3 kühm 3.3 kühm 330 ühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF		
MP MP MP	2 54.01.0020 3 1.727.910.01	1 pcs 3 pcs 1 pcs	Monitor PCB Contact Pin Kuehlblech			XIC1 XIC2	54.03.0166 54.03.0166	8 Pole 8 Pole	IC Socket IC Socket		
MP MP	5 1.011.235.23 6 1.011.235.29	2 pcs 2 pcs 6 pcs	Tastengehaeuse 3er Schaltmatte 3er Bolzen			XIC 4 XIC 5	54.03.0166 54.03.0168 54.03.0166	8 Pole 16 Pole 8 Pole	IC Socket IC Socket IC Socket		
MP MP	8 1.011.235.33 9 1.727.910.10	6 pcs 6 pcs 0 pcs	Drucktaste Kalotte gelb No•Schild			XIC6 XIC8	54.03.0168 54.03.0166 54.03.0166	16 Pole 8 Pole 8 Pole	IC Socket IC Socket IC Socket		
MP MP MP	11 1.010.050.22 12 21.53.0355	6 pcs 2 pcs 2 pcs	LED Socket Distanzbolzen 18mm Schrauben M3,8mm			XIC 9 XIC 10 XIC 11	54.03.0166 54.03.0166 54.03.0167	8 Pole 8 Pole 14 Pole	IC Socket IC Socket IC Socket		
MP MP	.14 50.20.2002	2 pcs 4 pcs 4 pcs	Sicherungsscheiben Transistorenclips Isolierscheiben			XIC - 12 XIC - 13 XIC - 14	54.03.0167 54.03.0167 54.03.0167	14 Pole 14 Pole 14 Pole	IC Socket IC Socket IC Socket		
Q	2 50.03.0350	MPF4392 MPF4392	J112 FET J112 FET			XIC15 XIC16 XIC17	54.03.0167 54.03.0167 54.03.0167	14 Pole 14 Pole 14 Pole	IC Socket IC Socket IC Socket		
	4 50.03.0495	BD135-16 BD136-16 BD135-16	NP N PN P NP N			XIC 18 XIC 19	54.03.0167 54.03.0167	14 Pole 14 Pole	IC Socket IC Socket		
Q			PNP								
Q	6 50.03.0510 1 57.11.3473	BD136-16 47 kOhm	2%, 0.25W, MF								
Q Q Q	50.03.0510 57.11.3473 57.11.3473 57.11.3473		2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF		EL=E1 MANUF	ectrolytic. ACTURER:	PP=Polypropyler	o. SI=Silicon	, MF=Metal Film		

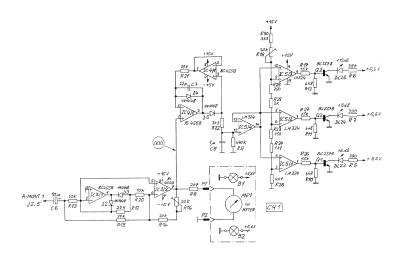
# EXT. VU-PANEL 2CH WIRING DIAGRAM EXT. VU-PANEL MONO WIRING DIAGRAM

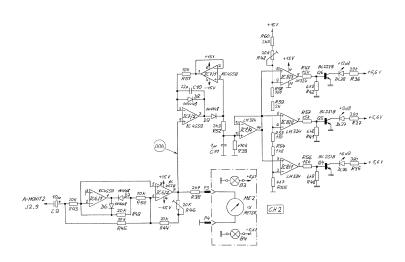








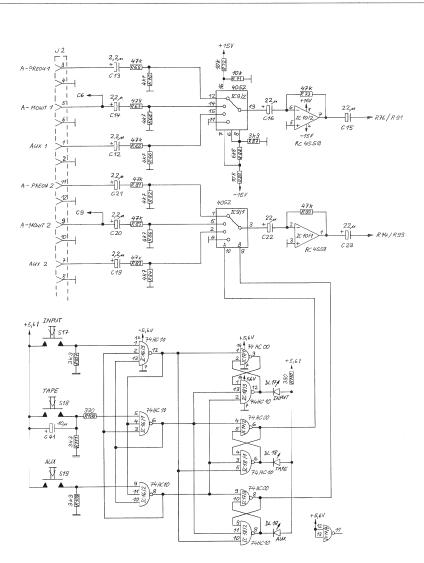




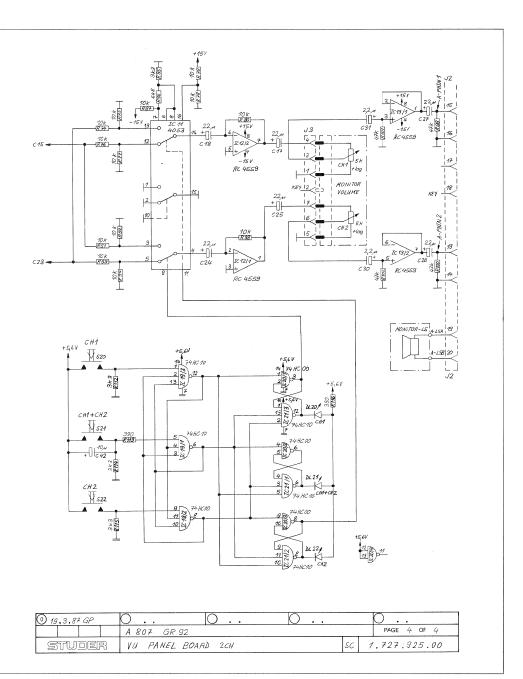
19.3.87 GP	0	0	0	0
	A 807 GR 92			PAGE 2 OF 4
STUDER	VU PANEL BOAR	R)) 2CH	SC	1.727,925,00



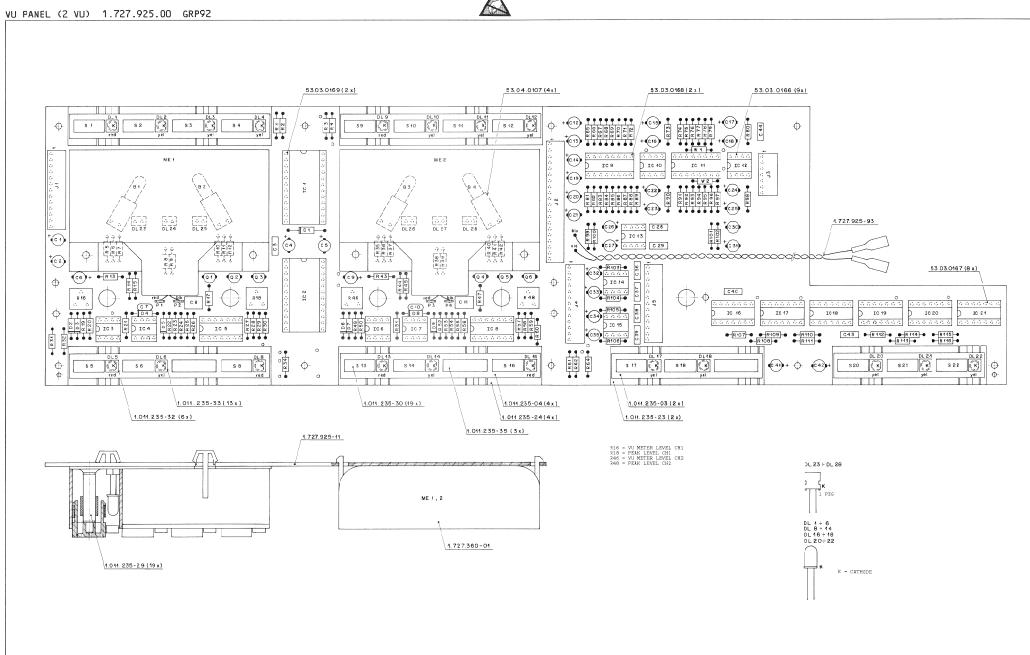
#### VU PANEL (2 VU) 1.727.925.00 GRP92



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STUDER A807 7/142

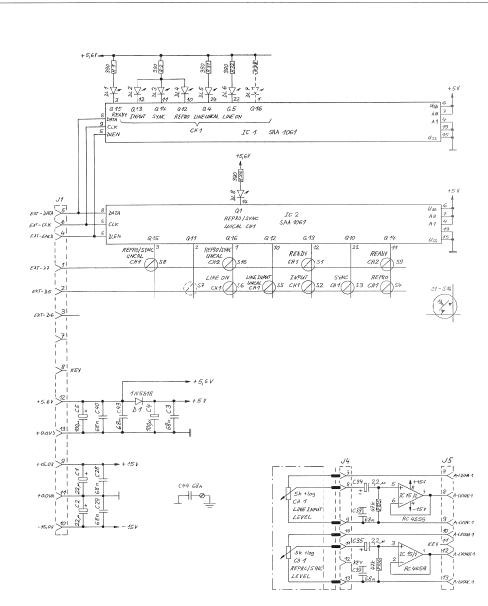


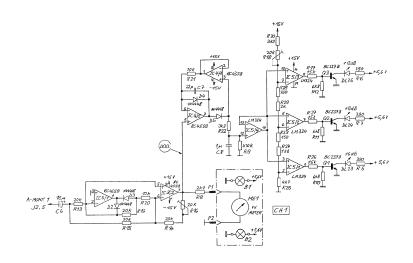
## VU PANEL (2 VU) 1.727.925.00 GRP92

D. POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALEN	IT HANUF.	IND. POS.ND. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	ING. POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	MANUF.
5	6 V 0-01 A Larp 6 V 0-02 A Larp 10 V 0-02 A Larp 10 V 0-02 A Larp 10 U 0 C 0 C 0 C 0 C 0 C 0 C 0 C 0 C 0 C		J 1 54.01.0293 J 2 34.01.0203 J 3 54.01.0203 J 4 54.01.0299 J 5 54.01.0299 ME 1 1.727.360.01 MP 1 43.01.0109 MP 2 31.03.0221 MP 3 1.011.233.01 MP 3 1.011.233.01 MP 3 1.011.233.01	13-Pair   C  11 Socket Strip   22-Pair   C  11 Socket Strip   7-Pair   C  11 Socket Strip   13-Pair   C  11 Socket Strip   13-Pair   C  11 Socket Strip   13-Pair   C  11 Socket Strip   Value   Val	AMP AMP AMP AMP AMP	8. 75 57.11.4(0) 8. 77 57.11.4(0) 8. 77 57.11.4(0) 8. 77 57.11.4(0) 8. 70 57.11.4(0) 8. 10 10 17.11.4(0) 8. 10 10 17.11.4(0) 8. 10 10 17.11.4(0) 8. 10 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0) 8. 10 17.11.4(0)	13 kūhs 22a 0.25s, nF 1 10 kūhs 22a 0.25s, nF 1 11 kūhs 22a 0.25s, nF 1 12 kūhs 22a 0.25s, nF 1 13 kūhs 22a 0.25s, nF 1 14 kūhs 22a 0.25s, nF 1 15 kūhs 22a 0.25s, nF 1 16 kūhs 22a 0.25s, nF 1 17 kūhs 22a 0.25s, nF 1 18 kūhs 22a 0.25s, nF 1 19 kūhs 22a 0.25s, nF 1 10 kūhs 22a 0.25s, nF 1 11 kūhs 22a 0.25s, nF 1 12 kūhs 22a 0.25s, nF 1 13 kūhs 22a 0.25s, nF 1 14 kūhs 22a 0.25s, nF 1 15 kūhs 22a 0.25s, nF 1 16 kūhs 22a 0.25s, nF 1 17 kūhs 22a 0.25s, nF 1 18 kūhs 22a 0.25s, nF 1 19 kūhs 22a 0.25s, nF 1 10 kūhs 22a 0.25s, nF 1 11 kūhs 22a 0.25s, nF 1 12 kūhs 22a 0.25s, nF 1 13 kūhs 22a 0.25s, nF 1 14 kūhs 22a 0.25s, nF 1 15 kūhs 22a 0.25s, nF 1 16 kūhs 22a 0.25s, nF 1 17 kūhs 22a 0.25s, nF 1 18 kūhs 22a 0.25s, nF 1 18 kūhs 22a 0.25s, nF 1 19 kūhs 22a 0.25s, nF 1 10 kūhs 22a 0.25s, nF 1	
C	22 UF -201 22 7 EL 23 UF -201 22 7 EL 24 UF -201 20 7 EL 25 UF -201 20 7 EL 26 UF -201 20 7 EL 27 UF -201 20 7 EL 28 UF -201 20 7 EL 29 UF -201 20 7 EL 20 UF -201 20 7 EL 21 UF -201 20 7 EL 22 UF -201 20 7 EL 23 UF -201 20 7 EL 24 UF -201 20 7 EL 25 UF -201 20		MP6 1.011.233.24 MP6 1.011.233.25 MP6 1.011.233.35 MP10 1.012.35.35 MP11 1.011.233.35 MP11 1.011.233.35 MP12 1.727.362.93 MP13 1.727.925.10 MP14 1.727.925.10 MP15 1.727.925.10	10 pcs Push button 1495 6 pcs Calotte red 13 pcs Calotte vel 3 pcs Calotte vel 5 pcs Calotte vel 6 pcs Calotte vel 6 pcs No. Lober Panel Board 6 pcs No. Lober PcG 6 pcs L-15T VU PANEL 80ARU	AMP	R. 99 37-11.4103 R. 99 37-11.4103 R. 91 37-11.4103 R. 91 37-11.4103 R. 92 37-11.4103 R. 94 37-11.4103 R. 95 37-11.4103 R. 95 37-11.4103 R. 97 37-11.4103 R. 98 37-11.4103 R. 99 37-11.4103 R. 99 37-11.4103 R. 99 37-11.4103		
23 59-22-3200  1 24 59-22-3200  1 25 59-22-3200  1 26 59-22-3200  1 27 59-22-3200  1 28 59-06-0603  1 30 59-22-8229  1 31 59-22-8229  1 31 59-22-8229		7.925.00 FAGE :	P 2 54.02.0320 P 3 54.02.0320 P 4 54.02.0320 U 1 50.03.0434 U 2 50.03.0434 U 2 50.03.0434 U 5 50.03.0434	PIG 2.590.8 PIG 2.	ANP ANP ANP APP	R. 101 97.11-4173  R. 102 97.11-4173  R. 103 97.11-4173  R. 103 97.11-4173  R. 105 97.11-4173  R. 105 97.11-4173  R. 107 97.11-4173  R. 107 97.11-4173  R. 110 97.11-4173  R. 111 97.11-4173	47 k0hm 2%, 0.25%, MF 47 k0hm 2%, 0.25%, MF 47 k0hm 2%, 0.25%, MF 48 k0hm 2%, 0.25%, MF 49 k0hm 2%, 0.25%, MF 39 khm 2%, 0.25%, MF	5.00 PAGE 7
D. POS.NO. PART NO.	VALVE SPECIFICATIONS / EQUIVALES	NT MANUF.	IN). POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT  390 Ohm 2%, 0.25%, MF	MANUF .	IND. POS-NO. PART NO.  R+++112 57-11-4332	7ALUE SPECIFICATIONS / EQUIVALENT  3-3 KOhm 2%, 0.25%, MF	MANUF.
C 33	2.7 UF -201 29 V EL 22 UF -201 29 V EL 68 NF -201 29 V EL 68 NF 101 50 V PE'P		### 1	190		R113 57.11.4391 R115 57.11.4332 R115 57.11.4332 R115 57.11.4391	330 Ohm 2%, 0.25%, MF 3.3 kOhm 2%, 0.25%, MF 3.3 kOhm 2%, 0.25%, MF 390 Ohm 2%, 0.25%, MF	
C38 59-06-0683 C40 59-06-0683 C41 59-22-6100	68 nf 10% 50 V PETP 13 uf -20% 25 V EL 68 nf 10% 50 V PETP 68 nf 10% 50 V PETP 68 nf 10% 50 V PETP		R6 57-11-4391 R7 57-11-4391 R8 57-11-4272 R9 57-11-4474 R10 57-11-4682	390 Uha 2% 0.25% MF 390 Uha 2% 0.25% MF 2.7 kOha 2% 0.25% MF 470 kOha 2% 0.25% MF 6.8 kOha 2% 0.25% MF		X81 53-04-0107 XB2 53-04-0107 XB3 53-04-0107 XB3 53-04-0107	Lamp holder Lamp holder Lamp holder Lamp holder	
C43 19-06-0683 C44 59-06-0683 D1 50-04-0512	68 nF 10t 50 V PETP 68 nF 10t 50 V PETP 1N5818 30 V Schottky		R11 57-11-9682 R12 57-11-4682 R13 57-11-3203 R14 57-11-3203	6.8 kOhm 2%, 0.25%, NF 6.8 kOhm 2%, 0.25%, MF 20 kOhm 1%, 0.25%, MF 20 kOhm 1%, 0.25%, MF		XIC1 53-03-0169 XIC2 53-03-0169 XIC3 53-03-0166 XIC4 53-03-0166		
D1 50.04.0512 D2 20.04.0125 D3 50.04.0125 D4 20.04.0125 D5 50.04.0125 D5 50.04.0125 D5 50.04.0125 D5 50.04.0125	10-51.1 30 V Schottky 104444 50 V S1 104444 50 V S1 104444 50 V S1 104446 50 V S1		R - 13	20 kOhm 1%, 0.25M, NF 20 kOhm 10%, 0.5 M, PCerm 15 kOhm 2%, 0.25M, NF 20 kOhm 10%, 0.5 M, PLerm		X[C] 53.03.01.69 X[C] 53.03.01.69 X[C] 53.03.01.66 X[C] 53.03.01.66 X[C] 53.03.01.66 X[C] 53.03.01.67 X[C] 53.03.01.67 X[C] 53.03.01.67 X[C] 53.03.01.69 X[C] 53.03.01.69 X[C] 53.03.01.69	24-Pole IC Socket 8-Pole IC Socket 8-Pole IC Socket 14-Pole IC Socket 14-Pole IC Socket 8-Pole IC Socket 8-Pole IC Socket 14-Pole IC Socket 14-Pole IC Socket	
D6 50-09-0125 D7 50-09-0125 D8 50-04-0125 D9 50-04-0125	1N4448 50 V SI 1N4448 50 V SI 1N4448 50 V SI 1N4448 50 V SI		R19 57-11-3203 R20 57-11-4103 R21 57-11-4103 R22 57-11-3332	20 KUha 12, 0.25%, MF 10 kUha 22, 0.25%, MF 10 kUha 22, 0.25%, MF 3-3 KUha 22, 0.25%, MF		XIC5 53-03-0166 XIC10 53-03-0166 XIC11 53-03-0166 XIC12 53-03-0166	3-Pole IC Socket 15-Pole IC Socket	
DL1 50-04-2115 DL2 50-04-2500 DL3 50-04-2500 DL4 50-04-2500 DL5 50-04-2500	MV5752 LED red D=5 mm MV5352 LED yel D=5 mm MV5352 LED yel D=5 mm MV5352 LED yel D=5 mm MV5352 LED yel D=5 mm MV5752 LED yel D=5 mm MV5352 LED yel D=5 mm	61 61 61 61 61	R22 57-11-v332 R23 57-11-v151 R24 57-11-v182 R25 57-11-v472 R26 57-11-v153 R27 57-11-v153	1-8 KOha 2%, 0.25%, MF 1-5 KOha 2%, 0.25%, MF 1-5 KOha 2%, 0.25%, MF 1-5 KOha 2%, 0.25%, MF		XIC12 53-03-0166 XIC14 53-03-0166 XIC15 53-03-0166 XIC15 53-03-0167		
DL5 50.04.2115 DL5 50.04.2300 DL7 DL8 50.04.2115 DL9 50.04.2115	MV5752 LED red D=5 mm MV5352 LED yel D=5 mm not used MV5752 LED red D=5 mm		R28 57-11-3751 R29 57-11-3202 R30 57-11-332 R31 57-11-3991	750 Oha 12, 0.25 M, MF 2 kOha 12, 0.25 M, MF 3.3 kOha 22, 0.25 M, MF 390 Oha 22, 0.25 M, MF		XIC	8-Pele IC Socket 8-Pele IC Socket 14-Pele IC Socket	
DL13 50-04-2500 DL11 50-04-2500 DL12 50-04-2500	M95752 LED red D=5 mm M35354 LED yel D=5 mm M35354 LED yel D=5 mm M35351 LED yel D=5 mm M35751 LED red D=5 mm M35751 LED yel D=5 mm M35752 LED yel D=5 mm	61 61 61 61 61 61	R****35 57*11**391 R****35 57*11**391	390 Ohn 2%, 0.25%, MF not used 390 Ohn 2%, 0.25%, MF 390 Ohn 2%, 0.25%, MF 390 Ohn 2%, 0.25%, MF 390 Ohn 2%, 0.25%, MF		X1C21 53-03-0167	14-Pele IÜ Socket	
DL13 50.04.2115 DL14 50.04.2500 U D E R (00) 87/06/D1 GP	MV5751 LED red D=5 mm MV5352 LED yel D=5 mm VU PANEL BOARD 2CH 1.72	G1 G1 27.925.00 PAGE 2	R36 57.11.4391 R37 57.11.4391 STUDER (00) 87/06/91 GP		00 PAGE 5	S T U 0 E R (04) 67/06/01 G	F VU PANEL BOARD ZCH 1.727.92	5.00 PAGE 8
, POS-NO. PART NO-	YALUE S≥ECIFICATIONS / EQUIVALER	NT MANUF.	IND. POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO. PART NO.	VALUE SPECIFICATIONS / EQUIVALENT	MANUF.
DL15 DL15 DL17 DL17 DL13 DL19 DL25 DL25 DL25 DL25 DL25 DL26 DL26 DL26 DL26 DL26 DL27 DL27 DL28	NOT USE of MYST24 LED rec 0.25 mm MYST25 LED rec 0.25 mm MYS252 LED yell 0.25 mm MYS2124 LED rec 0.25521.81 MYS7124 LED rec 0.25521.81	61 61	R38 57.11.4272 R39 57.11.4477 R40 57.11.4682 R41 57.11.4682 R42 57.11.4682 R43 57.11.3203	2-7 (Ohm		CER-Ceramic: tL=flectrolytic: MF=4etal Film: P(erm=Pot: Cer MANJFACTURER: AMP: GI=General NS=National Sem	PETP=Polyester, SI=\$ilicon, met, Instrument, ITT, Mot=Motorola, iconductor , Ph=Philips, RamReytheon	
DL21 50.04.2500 DL22 50.04.2500 DL23 50.04.2119 DL25 50.04.2119 DL25 50.04.2119	MV3352 EED yel D=5 mm MV37124 EED red 6-35¢3.el MV57124 EED red 6-35¢3.el MV57124 EED red 6-35¢3.el	G1 G1 G1 G1 G1 G1	R44 57.11.3203 R45 57.11.3203 R46 58.01.8203 R47 57.11.4153	20 KUNB 12, 0.25%, MF 20 KUNB 12, 0.25%, MF 20 KUNB 102, 0.5 %, PCerB 15 KUNB 22, 0.25%, MF 20 KUNB 102, 0.5 %, PCerB 20 KUNB 102, 0.5 %, PCerB 20 KUNB 12, 0.25%, MF				
DL26 50-04-2:19 DL27 50-04-2:19 DL23 50-04-2:19	MV57124 LED rec 6.3503.81	G1 G1	R48 58.01.8203 R49 57.11.3203 R50 57.11.4103 R51 57.11.4103 R52 57.11.433	20 kOhn 124 0.25%, MF 10 kOhn 224 0.25%, MF 10 kOhn 224 0.25%, MF 10 kOhn 224 0.25%, MF 1.3 kOhn 224 0.25%, MF				
IC   50.13.0106 IC 2 50.13.0106 IC 3 50.09.0107 IC 4 50.09.0107	SAA 1061 Driver SAA 1061 Driver RC 4559 Dual Op. Amp. RC 4559 Dual Op. Amp.	Ph Ph Ra Ra	R52 57.11.4332 R53 57.11.4151 R54 57.11.4182 R55 57.11.4472 R56 57.11.4153	150 Ohn 2%, 0.25%, MF 1.8 kOhn 2%, 0.25%, MF 4.7 kOhn 2%, 0.25%, MF 15 kOhn 2%, 0.25%, MF				
1C 4 50.09.0107 1C 5 50.09.0107 1C 50.09.0107 1C 7 50.09.0107 1C 8 50.09.0107 1C 9 50.07.0024 1C 10 50.09.0107 1C 10 50.09.0107	3.A. 1001 971-907 RC 4559 3ual 0g- Amp- RC 4559 0ual 0g- Amp-	NS+Mot Ra Ra NS+Mo Mot Ra	R44 27.11.4029 R44 37.11.3203 R44 37.11.3203 R45 37.11.3203 R46 37.11.3203 R47 37.11.3203 R47 37.11.41303	4.7 (Oha 22, 0.25)4 NF 15 (Oha 22, 0.25)4 NF 15 (Oha 22, 0.25)4 NF 15 (Oha 22, 0.25)4 NF 26 (Oha 12, 0.25)4 NF 2 (Oha 12, 0.25)4 NF 33 (Oha 22, 0.25)4 NF 390 (Oha 22, 0.25)4 NF				
IC 12 50 - 09 - 0107 IC 13 50 - 09 - 0107	MC 14053 CMOS Analog Switch RC 4559 Dual Oc. Amo.	Ra Mot Ra Ra Ra	R62 57.11.4391 R63 57.11.4391 R64 57.11.4391 R65 57.11.4473	390 Una 24 0.25% MF 390 Oha 24 0.25% MF not used 390 Oha 24 0.25% MF 47 KDha 24 0.25% MF				
IC+++15 5D+D9+0107	RC 4559	Ra Ra	R66 57-11-4472 R67 57-11-4473 R68 57-11-4473 R69 57-11-4473	4-7 kOhn 2x, 0.25%, MF 4-7 kOhn 2x, 0.25%, MF 4-7 kOhn 2x, 0.25%, MF 4-7 kOhn 2x, 0.25%, MF				
1C 17 5D-17-1000 1C 18 50-17-1010 1C 19 5D-17-1010 1C 20 5D-17-1010 1C 21 50-17-1010	RC 4559 Dual Up. Amp. RC 4559 Dual Up. Amp. RC 4559 Dual Up. Amp. RC 456 Dual Up. Amp. MANO Gate RC 46 C Dual 2-Input MANO Gate RC 10 Triple 3-Input MANO Gate		R. 1.63  8. 1.65  8. 1.65  8. 1.65  8. 1.65  8. 1.65  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.67  8. 1.71  9. 1.1.410  8. 1.72  9. 1.1.410  8. 1.73  9. 1.1.410  8. 1.73  9. 1.1.410	390 Dana 2 de				
. n e e s (ac) 84/09/at 25		27.925.00 PAGE 3	R74 >7-11-4103 S T U D E R (00) 87/06/01 5P	10 kOhn 2%, 0.25%, HF VU PANEL EOARD 2¢H 1.727.92	5.00 PAGE 6	3RI6 B1/06/01 S T ∪ 0 E R (00) 87/06/01 G	2 VU PANEL SOARD 2CH 1.727.92	5.00 PAGE 9



VU PANEL (1 VU) 1.727.935.00 GRP92



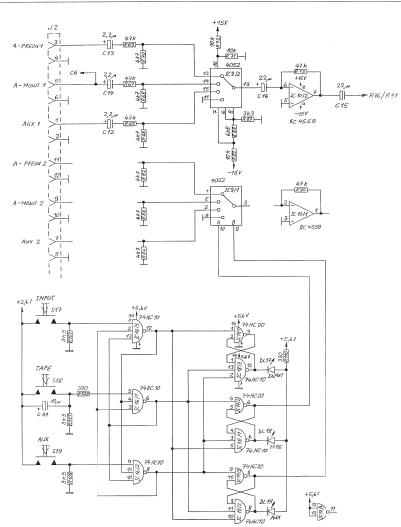


① 19.3.87 GP	O O	0	0
	A 807 GR 92		PAGE 2 OF 4
STUDER	VU PANEL BOARD MONO	SC	1.727,935,00

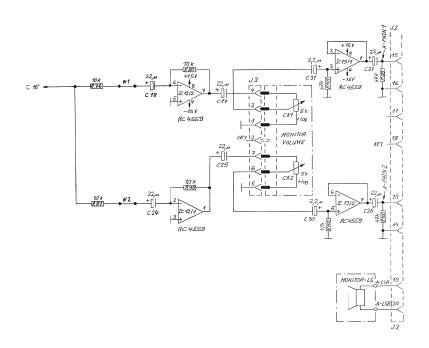


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## VU PANEL (1 VU) 1.727.935.00 GRP92

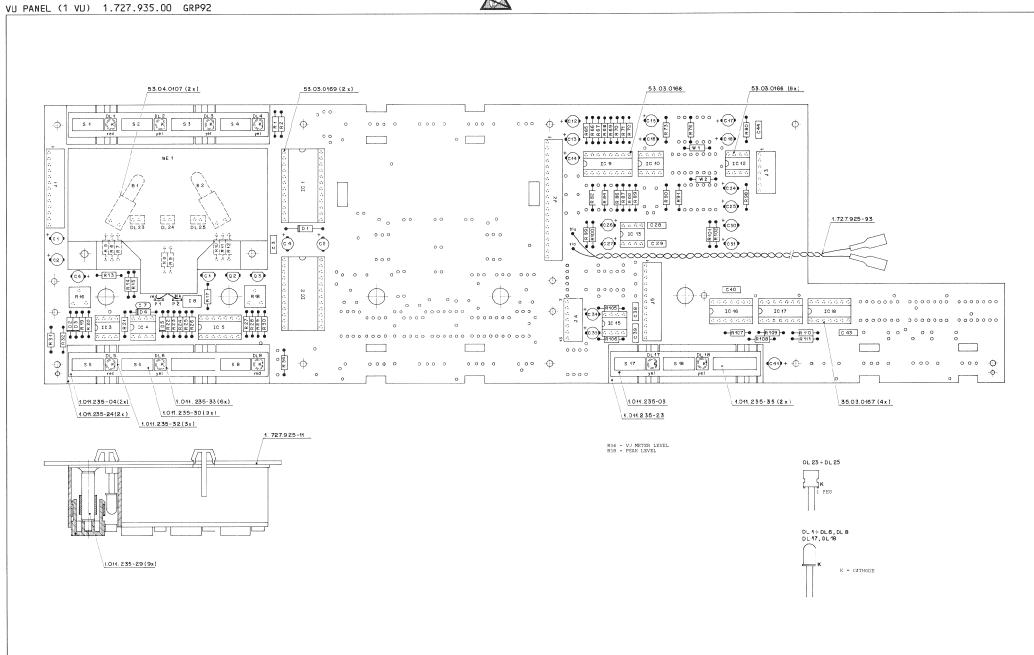


A807



① 19.3.87 GP	O O	0	0
	A 807 GR 92		PAGE 4 OF 4
STUDER	VU PANEL BOARD MONO	SC	1.727.935.00





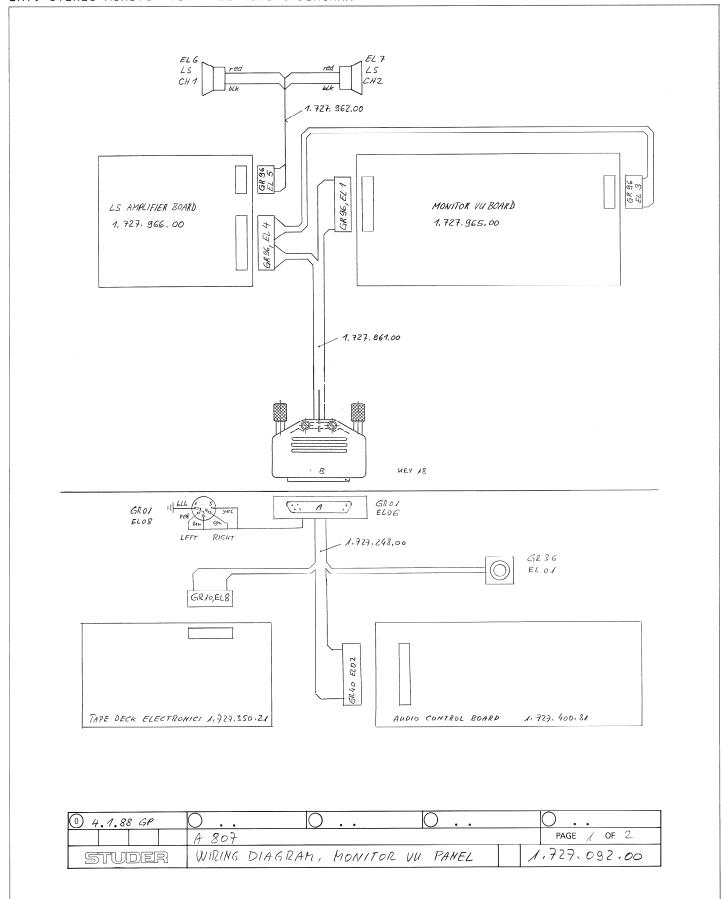
STUDER A807 7/146



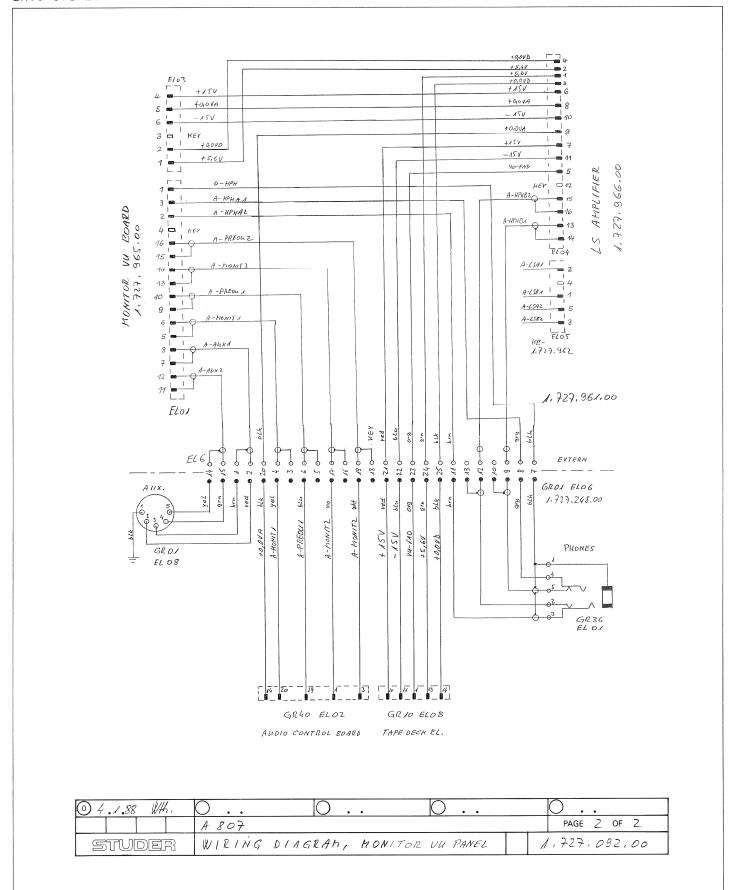
#### VU PANEL (1 VU) 1.727.935.00 GRP92

IND.	POS+NO+	PART 40.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IM0. P05.NO.	PART NO.	VALUE	SPECIFICATIONS / EQJIVALENT	MANUF.
	8 • • • • • 1 B • • • • • 2	51.02.0144 51.02.0144	6 V	0.03 A Lamp 0.03 A Lamp		R13 R14 R15	57.11.3203 57.11.3203 57.11.3203	20 kOhn 20 kOhn 20 kOhn 15 kOhn 15 kOhn 10 kOhn 10 kOhn 10 kOhn 10 kOhn 150 Ohn 150 Ohn 150 Ohn 150 Ohn 150 KOhn 150 KOhn 150 KOhn 150 KOhn	11 to 0.25% wife 12 to	
	C 2 C 3 C 4 C 5	59.22.5220 59.22.5220 59.06.0583 59.22.3101 59.22.3101	22 uf 22 uf 68 nf	-20% 25 V EL -20% 25 V EL 10% 50 V PETP		R17 R18	58.01.8203 57.11.4153 58.01.8203	20 kOhm 15 kOhm 20 kOhm	10%, 0.5 %, PCerm 2%, 0.25%, MF 10%, 0.5 %, PCerm	
	C5 C5 C7	59.22.6100	100 uf 100 uf 10 uf	-20% 10 V EL -20% 10 V EL -20% 25 V EL		R19 R20 R21	57.11.3203 57.11.4103 57.11.4103	20 kOhn 10 kOhn 10 kOhn	1% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
	CB C12 C13	59.34.2220 59.06.0105 59.22.8229 59.22.8229	22 pf 1 uf 2.2 uf	-COL 25 V EL -20L		R22 R23 R24	57.11.4332 57.11.4151 57.11.4182 57.11.4472	150 Ohn 150 Ohn 1-8 kOhn	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF	
	C 15	59.22.8229 59.22.6229 59.22.5220	2.2 uf 2.2 uf 22 uf	-20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL		R24 R25 R25 R27 R28 R29	57.11.4153 57.11.4153	15 kühn 15 kühn	2% 0.25% NF 2% 0.25% NF 2% 0.25% HF	
	C 17	59.22.5220 59.22.5220 59.22.9220	22 uF 22 uF 22 uF	-20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL		R29 R30 R31 R32	57.11.3751 57.11.3202 57.11.4332 57.11.4391	2 kühm 3.3 kühm	14, 0.25% NF 1%, 0.25% NF 2%, 0.25% NF 2%, 0.25% NF	
	C 25 C 26	59.22.5220 59.22.5220 59.22.5220	22 UF 22 UF 22 UF	-20% 25 V EL -20% 25 V EL 10% 50 V PETP		R32 R33 R34 R65	57.11.4391 57.11.4391	390 Oha 390 Oha 390 Oha	2% 0.25% MF not used 2% 0.25% MF	
	C 29	59.06.0583 59.06.0583	68 nf 68 nf 2•2 uf	10% 50 V PETP 10% 50 V PETP -20% 25 V EL -20% 25 V EL		R65 R60 R67 R68	07.11.4473 07.11.4472 07.11.4473 07.11.4473	47 kOhn 4+7 kOhn 47 kOhn	2% 0.25% HF 2% 0.25% HF 2% 0.25% HF	
	C	59.22.8229 59.22.8229 59.22.8229	2.2 Uf 2.2 Uf 2.2 Uf 2.2 Uf 2.2 Uf 22 Uf 23 Uf 24 Uf 25 Uf 26 Uf 27 Uf 28 Uf 29 Uf 20 Uf 2	101 50 V PETP 101 50 V PETP 2020 25 V EL 2020 25 V EL 2020 25 V EL 2020 25 V EL 2020 25 V PETP 101 50 V PETP 2020 50 V PETP		R69 R70	57.11.4472 57.11.4473 57.11.4472	4•7 kühn 47 kühn 4•7 kühn	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
	C 36 C 39 C 40	59.06.0583 59.06.0583 59.06.0583	68 nf 68 nf 68 nf	10% 50 V PETP 10% 50 V PETP 10% 50 V PETP		R71 R72 R73	57.11.4472 57.11.4473 57.11.4472 57.11.4103 57.11.4103 57.11.4473	10 kOhn 10 kOhn 47 kOhn	2% 0.25V MF 2% 0.25V MF 2% 0.25V MF	
	C 41 C 43 C 44	39 - 22 - 38 - 22 - 22	10 uf 68 nf 68 nf	-20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V EL -20% 25 V PETP 10% 50 V PETP		R76 R80 R82	57.11.4103 57.11.4103 57.11.4472	10 kOhe 10 kOhe 4-7 kOhe	2% 0.25% MF 2% 0.25% MF 2% 0.25% MF	
	U••••1 D••••2	50.04.0512 10.06.0125	1N5 018 1N4448	30 V Schottky 50 V SI		R68 R59 R70 R71 R72 R73 R76 R80 R82 R84 R86 R87	57-11-4473 57-11-4103 57-11-4103 57-11-4472 57-11-4472 57-11-4472 57-11-4332	590 Ohn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 10 kOhn	220 0.2594 eff  100 0.0505  10	
STU	D E R (	00) =7/06/OL GP	VU PANEL	80ARD MONO 1-727-935-00	PAGE 1	STUDER (O	0) 87/06/01 3P	VU PANEL	EOARO MONO 1 - 727 - 935	≈00 PAGE 4
180.	P05 • N0 •	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. PDS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MA NUF.
	D3 D4	50+04+0125 30+04+0125	1N4448 1N4448	50 V SI 50 V SI 50 V SI		R88		4 - 8 k Ohn		
	0 5	50+04+0125	1N4448 MU5752	115 0-5	GE	R99 R90 R91 R98	57.11.4682 57.11.44103 57.11.44103 57.11.44103 57.11.44103 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4473 57.11.4321 57.11.4332 57.11.4332	10 kühn 47 kühn 10 kühn 10 kühn	21. 0.259. 8F 22. 0.259. 8F	
	DL3 DL4	50.04.2500 50.04.2500 50.04.2500 50.04.2115	MV5352 MV5352 MV5352	LEO yel 0=5 mm LEO yel 0=5 mm LEO yel 0=5 mm	19 19 19 19 19	R98 R99 R100 R101	57.11.4473 57.11.4473 57.11.4473	47 k0hm 47 k0hm 47 k0hm	21, 0.25M, MF 21, 0.25M, MF 21, 0.25M, MF	
	DL1 DL2 DL3 DL5 DL5 DL7 OL8 DL17 DL18 DL19 DL19 DL23 OL24	50.04.2500	MV5752 MV5352	LEO yel 0-5 me LEO yel 0-5 me LEO yel 0-5 me LEO red 0-5 me LEO yel 0-5 me not used		R101 R105 R105 R107 R108 R109 R110	57.11.4473 57.11.4473 57.11.4473	10 kOhn 10 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 47 kOhn 3-3 kOhn 3-3 kOhn 3-3 kOhn 3-3 kOhn 3-3 kOhn	23, 0.25%, MF 23, 0.25%, MF 23, 0.25%, MF	
	DL17 DL18	\$0.04.2115 \$0.04.2500 \$0.04.2500	MV5752 MV5352 MV5352	LEG yel D=5 nm	19 19 19	R107 R108 R109	57.11.4332 57.11.4391 57.11.4332	3.3 kGhm 390 Ghm 3.3 kGhm	21. 0.25H: NF 21. 0.25H: NF 21. 0.25H: NF	
	DL23 DL24 DL25	50.04.2119 50.04.2119 50.04.2119	MV57124 MV57124 MV57124	not used LED red 6.3503.81 LED red 6.3503.81 LED red 6.3503.81	19 19 19		57.11.4332	390 Ohn 3+3 kOhm	23, 0-25H+ AF 23, 0-25H+ AF	
	DETTO		SAA 1061	Driver Dr	Ph	W2 XB1	57.11.4000 57.11.4000 53.04.0107		Bridge Bridge Lamp holder	
	IC1 IC2 IC3 IC4 IC5 IC9 IC10 IC12 IC13 IC15 IC16 IC17 IC18	\$0.13.40106 \$0.13.4006 \$0.09.40107 \$0.09.40107 \$0.09.40107 \$0.09.40107 \$0.09.40107 \$0.09.40107 \$0.09.40107 \$0.17.4010 \$0.17.4010 \$0.17.4010	SAA 1061 SAA 1061 RC 4559 LM 324 MC 14052 RC 4559 RC 4559 RC 4559 RC 4559 RC 4559 RC 4560 T4 HC 10 T4 HC 10	Oual Op. Amp. Oual Op. Amp. Oual Op. Amp.	Ph Ra Ra NS+ Mot	XB2 XE2	53.04.0107	24-Pole	Lamp holder IC Socket	
	IC9 IC10 IC12	50-07-0024 50-09-0107 50-09-0107	MC 14052 RC 4559 RC 4559	CMOS Analog Switch Dual Do. Amp. Dual Do. Amp.	NS+ Mot Mot Ra Ra Ra Ra	XIC 2 XIC 3 XIC 4	53.03.0169 53.03.0166 53.03.0166	24-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	IC 13 IC 15 IC 16	50.09.0107 50.09.0107 50.17.1010	RC 4559 RC 4559 74 HC 10	Dual Do. Amp. Dual Oo. Amp. Triple 3-input NAND Gate	Ra Ra	XIC5 XIC9 XIC10	53.03.0167 53.03.0168 53.03.0166	14-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket	
	IC17	50.17.1000 50.17.1010	74 HC DD 74 HC 10	Quad Z-Input NAND Gate Triple 3-Input NAND Gate		XIC++12 XIC++13 XIC++15	53.03.0166 53.03.0166	8-Pole 8-Pole 8-Pole	IC Socket IC Socket IC Socket	
	J2 J3 J4	54.01.0299 54.01.0237 54.01.0263 54.01.0263	13-Pole 20-Pole 7-Pole 7-Pole	CIS Socket Strip CIS Socket Strip CIS Socket Strip CIS Socket Strip	AHP AMP AMP	XIC1 XIC2 XIC3 XIC5 XIC9 XIC10 XIC112 XIC115 XIC15 XIC15 XIC18	53.03.0169 53.03.0169 53.03.0166 53.03.0167 53.03.0168 53.03.0166 53.03.0166 53.03.0166 53.03.0166 53.03.0167	24-Pole 24-Pole 8-Pole 8-Pole 14-Pole 8-Pole 8-Pole 8-Pole 14-Pole 14-Pole	[G Socket  IG Socket	
STU		03) 87/06/01 69		BCARD MDNO 1.727.935.00		STUDER (O			80ARD MONO L+727+93	5+00 PAGE 5
IND.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	AYFRE	SPECIFICATIONS / EQUIVALENT	HANUF.
	J5 ME1	54.01.0299 1.727.360.01	13-Pole	CIS Socket Strip VU Meter	AMP	CER=Ceramic, EL= MF=Metal Film, P MANUFACTURER: AM	Electrolytic, PE Cerm=Pot, Cermet P, GI=General In	TP=Polyeste :• istrument• I	r, SI=Silicon. TT, Mot=Motorola. h=Philips, Ra=Raytheon	
	MP2	+3+01+0108 53-03-0221 1+011+235+03 1+011+235+04 1+011+235+23	1 pcs 13 pcs	ESE Warning label 2-pole LED Socket Push button case 3° Push button case 4°		NS	=National Semico	onductor • P	h=Philips+ Ra=Raytheon	
	MP2 MP3 MP5 MP5 MP6 MP7	1.011.235.05	1 pcs 13 pcs 1 pcs 2 pcs 1 pcs 2 pcs 9 pcs	Push button case 3- Push button case 40 Conductive rubber 30 Conductive rubber 40						
	MP7 MP8	1.011.235.24 1.011.235.29 1.011.235.30 1.011.235.32	9 pcs 9 pcs 9 pcs	Bolt Push hittan 1485						
	MP10 MP11 MP12	1.011.235.33 1.011.235.35 1.727.362.93 1.727.935.10	9 pcs 3 pcs 6 pcs 2 pcs 1 pcs 1 pcs 1 pcs	Calotte red Calotte yel Oummy push button 1995 L-LST Commanc Panel Board						
	MP13 MP14 MP15	1.727.935.10 1.727.925.11 1.727.925.93	1 pcs 1 pcs 1 pcs	No. Label VU PANEL PCB L-LST VU PANEL BOARD						
	P 1 P 2	54.02.0320 54.02.0320		Plug 2.8*0.8 Plug 2.8*0.8	AMP AMP					
	Q2 Q2	50.03.0436 50.03.0436 50.03.0436	8C2378 8C2378 8C2378	BC547B, BC550B NPN BC547B, BC550B NPN BC547B, BC550B NPN						
	R 2 R 5	57.11.4391 57.11.4391 57.11.4391	390 Dhm 390 Dhm 390 Dhm	2%, 0.25H- MF 2%, 0.25H- MF 2%, 0.25H- MF						
	R6 R7 R8	57.11.4391 57.11.4391 57.11.4272	390 Dhm 390 Dhm 2•7 kDhm	2%, 0.25%, MF 2%, 0.25%, MF 2%, 0.25%, MF						
	R1 R2 R5 R6 R7 R8 R9 R10 R11	57-11-4391 57-11-4391 57-11-4391 57-11-4391 57-11-4391 57-11-472 57-11-4674 57-11-4682 57-11-4682 57-11-4682	390 Uhm 390 Uhm 390 Uhm 390 Uhm 390 Uhm 390 Uhm 470 KUhm 6-8 KUhm 6-8 KUhm 6-8 KUhm	22, 0.25M. MF 23, 0.25M. MF 24, 0.25M. MF 24, 0.25M. MF 22, 0.25M. MF 22, 0.25M. MF 22, 0.25M. MF 23, 0.25M. MF 24, 0.25M. MF		Ante et				
STU	R****12 D E R (1	57.11.4682 00) 87/66/01 GP	6.8 kDhm VU PANEL	2%, 0.25W, MF BOARD MONO 1.727.935.00	PAGE 3	GRIG 87/06/GL S T U D E R (0	0) 87/06/01 SP	VU PANEL	50ARD MBN0 1.727.935	-00 PAGE 6

# EXT. STEREO MONITOR VU-PANEL WIRING DIAGRAM

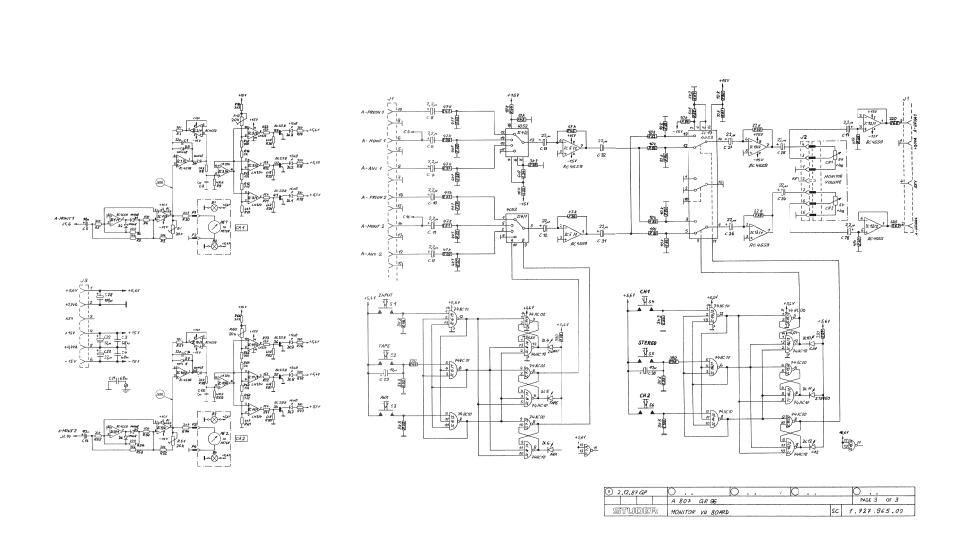


## EXT. STEREO MONITOR VU-PANEL WIRING DIAGRAM



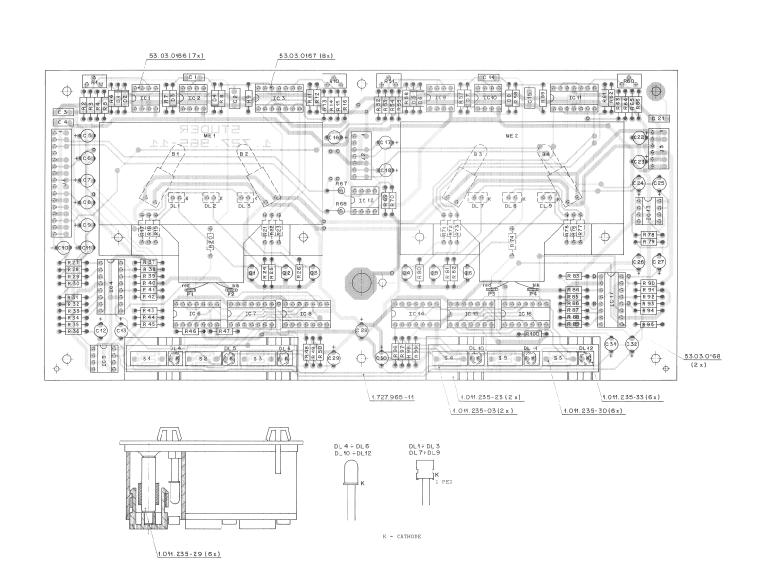


MONITOR WITH VU-METERS (STEREO) 1.727.965.00





MONITOR WITH VU-METERS (STEREO) 1.727.965.00



ND, POS.NO.	PART NO.	VALUE		/ EGOTVACENT	MANUF.
B1 B3 B7	51.02.0144 51.02.0144 51.02.0144 51.02.0144	P A P A P A	0.03 A E	.anp .anp .anp .anp	
C 1	59+39+2220 59+30+2105 59+30+2105 59+30+2105 59+22+8129 59+22+8129 59+22+8129 59+22+8129 59+22+8129 59+22+8129 59+22+8129 59+22+5120 59+31+2120 59+21+8129 59+21+8129 59+31+8120 59+31+	27 pF L uf 68 nF 68 nF 10 uF 2-2 uF	101 50 V	ER	
C3 C3 C3 C3 C3	59.06.0683 59.06.0683	68 nF	101 50 V 1 102 50 V 1 103 50 V 1 104 50 V 1 105 50 V 1	PETP PETP PETP	
C *****	59 + 22 + 6100 59 + 22 + 822 9	10 uF 2+2 uF	-201 25 V I	L L	
C d	59.22.8229 59.22.8229	2 • 2 uf 2 • 2 uf	-20% 25 V I -20% 25 V I -20% 25 V I	L L	
C9 C10	59.22.8229 59.22.8229	2.2 uf 2.2 uf	-20% 25 V I	L L	
C	59.22.8129 59.22.5820	2 • 2 uf 22 uf	-20% 25 V F -20% 25 V F -20% 25 V F	L L	
C **** 13	59.22.5220 59.34.2220	22 uf 22 pf	-201 25 V E	L ER	
C 1 5	>9.0b.0105 59.22.6100	l uf 10 uf	101 50 V F -201 25 V F -201 25 V F	PETP L	
C18	59 - 22 - 822 9 59 - 22 - 822 9	2 - 2 uf 2 - 2 uf	-201 25 V E	L	
C21 C22 C23	59.06.0683 59.22.5220	68 nF 22 uF	101 50 V 8	ETP L	
C29 C29	59.22.5220	22 uf	-201 25 V E -201 25 V E -201 25 V E	L L	
L 2 b	59.22.5220	1 uf 10 uf 2-2 uf 68 nf 22 uf 22 uf 22 uf 22 uf 21 uf 22 uf 21 uf 22 uf	-201 25 V E -201 25 V E -201 25 V E	L L	
C 2 s	59-22-3101	100 uf	-201 25 V E	L L L	
C27 C29 C30 C31 C32	59.22.6100	22 uF 22 uF 100 uF 10 uF 10 uF 22 uF 22 uF	-201 25 / E -201 25 / E -201 25 / E		
C 32	59.06.0683 59.22.5220 59.22.5220 59.22.5220 59.22.5220 59.22.5220 59.22.5220 59.22.5220 59.22.5220 59.22.6100 59.22.6100 59.22.5220 59.22.5220	22 uF	-201 25 / E	L L	
0	50+0++0125 00) 88/01/05 GP	IN4448 MONITOR V			
13068 (	00) 88/01/05 GP	MUNITUR V	U BUANU	1-727-965-00	FAGE L
NO. POS.NO.		YALUE			MANUF.
D3 D3 D5 D5 D7	50-04-0125 50-04-0125 50-04-0125 50-04-0125 50-04-0125 50-04-0125 50-04-0125	1N+448 1N+448 1N+448 1N+448 1N+448 1N+448	50 V 50 V 50 V 50 V 50 V 50 V	51 51 51 51	
D	50.04.0125	114448	50 V	1	
D1	50.04.0125 50.04.0125	184448	50 V 50 V	5 I	
DL		HV57124	LED red 6+3503		61
DL **** 2 DL **** 3	50.04.2119	MV57124	LED rec 6.35=3.	.81	61
DL *****	50+04+2500	MV5352 MV5352	LED yel 0=5 mm		19
DL	50-04-2100	MV5352 MV57124	LED yel 0=5 mm	.81	61
DL 3 DL 9	50.04.2119	MV57124 MV57124	LED rec 6.35=3. LED red 6.35=3.	. 81 . 81	G I
DL 5 DL 7 DL 7 DL 9 DL 10 DL 11 DL 12	50.04.2119 50.04.2119 50.04.2119 50.04.2500 50.04.2500 50.04.2519 50.04.2119 50.04.2119 50.04.2119 50.04.2119 50.04.2119 50.04.2100 50.04.2000 50.04.2000	MV57124 MV5352 MV5352 MV5352 MV57124 MV57124 MV57124 HV5352 MV5352 MV5352	LED red 6.3593. LED red 6.3593. LED rec 6.3593. LED yel 0=5 me LED yel 0=5 me LED red 6.3593. LED rec 6.3593. LED red 6.3593. LED yel 0=5 me LED yel 0=5 me LED yel 0=5 me LED yel 0=5 me		61 61 61 61 61 61 61 61 61
	50 - 04 - 2500	MV5352	LED yel 0=5 mm		
102	50.09.0107 50.09.0107	RC 4559 RC 4559 RC 4559 RC 4555 RC 4555 74 HC 10 74 HC 00 74 HC 10 RC 4559 RC 4559	Dua! Op. Amp. Dua! Op. Amp.		Ra Ra
10	50.05.0199 50.07.0024	LM 324 MC 14052	Quad Op. Anp. CMOS Analog Svi	tch	NS+Mot Mot Ra
10	50.09.0107 50.17.1010	74 HC 10	Triple 3-Input	NAND Gate	Ra
10	50-17-1010	74 HC 10	Triple 3-Input	NAND Gate	Ra
IC 10	50-09-0107	RC 4559	Buad Op. Amp.		Ra NS-Mot
1012	50-09-0107	RC 4559	Dual Op. Amp.		Ra NS+Mot Ra Ra
10 1 10 2 10 3 10 4 10 5 10 6 10 7 10 16 10 16 10 16 10 16	50-11-1010 50-11-1000	74 HC 10	Triple 3-Input	NAND Gate	
IC 16	50.09.0107 50.09.0107 50.05.0199 50.07.0024 50.09.0107 50.17.1010 50.17.1010 50.17.1010 50.09.0107 50.09.0107 50.09.0107 50.09.0107 50.09.0107 50.09.0107 50.09.0107 50.09.0107		Dual Op- Amp- Juel UF- Amp- Friple 3-Input Friple 3-Input Friple 3-Input Friple 3-Input Juel UF- Amp- Friple 3-Input Friple 3-Input	NAND Gate	
TUDER (	00) 88/01/05 GP	MONITOR V	J BOARD	1 - 72 7 - 965 - 00	FAGE 2
iD. PDS.NO.	PART NO-	VALUE	SPECIFICATIONS A	FOUTVALENT	MANUF.
ND. POS.NO.	PART NU-	VALUE RC 14053	SPECIFICATIONS /		MANUF,
1617	53.01.0015	MC 14053	CMOS Analog Swi	tch	Mot
				tch	
IC17 J2 J2 J2	50.01.0015 51.01.0301 54.01.0263 54.01.0238 1.727.360.01	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi CIS Socket Stri CIS Socket Stri CIS Socket Stri VU Peter VU Peter	tch P P P	Mot
IC17 J2 J2 J2	50.01.0015 51.01.0301 54.01.0263 54.01.0238 1.727.360.01	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi CIS Socket Stri CIS Socket Stri CIS Socket Stri VU Peter VU Peter	tch P P P	Mot AMP AMP AMP St St
IC17 J1 J2 J2 J2	50.01.0015 51.01.0301 54.01.0263 54.01.0238 1.727.360.01	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi (IS Socket Stri (IS Socket Stri (IS Socket Stri VU Peter VU Peter ESE Warning lab 2-pole LED Sock fush button cas	tch p p p set est est = 3°	Mot AMP AMP AMP St St
IC17 J2 J2 J2	50.01.0015 51.01.0301 54.01.0263 54.01.0238 1.727.360.01	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi (IS Socket Stri (IS Socket Stri (IS Socket Stri VU Peter VU Peter ESE Warning lab 2-pole LED Sock fush button cas	tch p p p set est est = 3°	Mot AMP AMP AMP St St
IC17 J2 J2 J2	50.01.0015 51.01.0301 54.01.0263 54.01.0238 1.727.360.01	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi (IS Socket Stri (IS Socket Stri (IS Socket Stri VU Peter VU Peter ESE Warning lab 2-pole LED Sock fush button cas	tch p p p set est est = 3°	Mot AMP AMP AMP St St
IC17 J11 J2 J3 ME2 HP12 HP2 MP3 HP5 HP5 HP7 MP7 MP7 MP7 MP7 MP7 MP7	53.01.0015 54.01.0203 54.01.0203 54.01.0203 54.01.0238 1.727.360.01 43.01.0108 53.03.0221 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.30 1.01.235.30	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi (15 Socket Stri (15 Socket Stri (15 Socket Stri (17 Socket Stri VU Peter (15 E Warning lab 2-pole LED Sock fush button cas Concuctive rub rush rush button 146 Calotte yel L-LST Command P No. Lobel NONITION VU PCS	tch p p p set est est = 3°	Mot AMP AMP AMP St St St St St St St
IC17  J1  J2  J3  ME1  MP10  MP4  MP4  MP5  MP6  MP7  MP6  MP7  MP8	53.01.0015 54.01.0203 54.01.0203 54.01.0203 54.01.0238 1.727.360.01 43.01.0108 53.03.0221 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.30 1.01.235.30	MC 14053	CMOS Analog Swi (15 Socket Stri (15 Socket Stri (15 Socket Stri (17 Socket Stri VU Peter (15 E Warning lab 2-pole LED Sock fush button cas Concuctive rub rush rush button 146 Calotte yel L-LST Command P No. Lobel NONITION VU PCS	tch p p p set est est = 3°	Mot AMP AMP AMP St St St St St St St
IC17  J1  J2  J3  ME1  MP10  MP4  MP4  MP5  MP6  MP7  MP6  MP7  MP8	53.01.0015 54.01.0203 54.01.0203 54.01.0203 54.01.0238 1.727.360.01 43.01.0108 53.03.0221 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.23 1.01.235.30 1.01.235.30	MC 14053 16-Pole 7-Pole 6-Pole	CMOS Analog Swi (15 Socket Stri (15 Socket Stri (15 Socket Stri (17 Socket Stri VU Peter (15 E Warning lab 2-pole LED Sock fush button cas Concuctive rub rush rush button 146 Calotte yel L-LST Command P No. Lobel NONITION VU PCS	tch p p p set est est = 3°	Mot AMP AMP AMP St St St St St St St
IC 17  J 17  J 22  J 3  ME 1  ME 2  MP 1  MP 3  MP 3  MP 7  MP 6  MP 7  MP 10  P 11  P 12  P 3  P 2  P 3  P 4	53.01.0015 55.01.0031 55.01.0263 55.01.0263 55.01.0263 55.01.0263 55.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 55.01.0303	AC 14053 16-Pole 7-Pole 6-Pole  1 pcs 12 pcs 2 pcs 2 pcs 6 pcs 6 pcs 6 pcs 6 pcs 1 pcs	CMOS Analog Swi (15 Socket Str. (17 Socket Str. (17 Socket Str. (17 Socket Str. (18 Socket Str	tch p p p p tel act	Mot AMP AMP AMP St St
IC 17  J 17  J 22  J 23  ME 11  ME 22  MP 31  MP 34  MP 37  MP 36  MP 39  MP 10  P 11  P 12  P 22  P 33  P 44	53.01.0015 55.01.0031 55.01.0263 55.01.0263 55.01.0263 55.01.0263 55.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 55.01.0303	AC 14053 16-Pole 7-Pole 6-Pole  1 pcs 12 pcs 2 pcs 2 pcs 6 pcs 6 pcs 6 pcs 6 pcs 1 pcs	CMOS Analog Swi (15 Socket Str. (17 Socket Str. (17 Socket Str. (17 Socket Str. (18 Socket Str	tch p p p p tel act	Mot AMP AMP AMP St St St St St St St
IC 17  J 17  J 22  J 23  ME 11  ME 22  MP 31  MP 34  MP 37  MP 36  MP 39  MP 10  P 11  P 12  P 22  P 33  P 44	53.01.0015 55.01.0031 55.01.0263 55.01.0263 55.01.0263 55.01.0263 55.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 55.01.0303	AC 14053 16-Pole 7-Pole 6-Pole  1 pcs 12 pcs 2 pcs 2 pcs 6 pcs 6 pcs 6 pcs 6 pcs 1 pcs	CMOS Analog Swi (15 Socket Str. (17 Socket Str. (17 Socket Str. (17 Socket Str. (18 Socket Str	tch p p p p tel act	Mot AMP AMP AMP St St St St St St St
IC17  J1  J2  J3  NE2  MP3  MP	51-01-00.5  51-01-	NC 14053  10-Pole 7-Pole 6-Pole  1 pcs 12 pcs 2 pcs 6 pcs 6 pcs 6 pcs 12 pcs 12 pcs 12 pcs 13 pcs 14 pcs 15 pcs 16	CMOS Analoj Svi CLIS Socket Stri VI Peter V	tch p p p set est est = 3°	Mot AMP AMP AMP St St St St St St St
IC17  J1  J2  J3  NE2  MP3  MP	51-01-00.5  51-01-	NC 14053  10-Pole 7-Pole 6-Pole  1 pcs 12 pcs 2 pcs 6 pcs 6 pcs 6 pcs 12 pcs 12 pcs 12 pcs 13 pcs 14 pcs 15 pcs 16	CMOS Analoj Svi CLIS Socket Stri VI Peter V	tch p p p p tel act	Mot AMP AMP AMP St St St St St St St
IC 17  J 17  J 2  J 2  J 3  ME 1  ME 2  MP 1  MP 3  MP 7  MP 6  MP 7  MP 10  P 11  P 12  P 2  P 3  P 4	53.01.0015 55.01.0031 55.01.0263 55.01.0263 55.01.0263 55.01.0263 55.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 53.01.0263 55.01.0303	AC 14053 16-Pole 7-Pole 6-Pole  1 pcs 12 pcs 2 pcs 2 pcs 6 pcs 6 pcs 6 pcs 6 pcs 1 pcs	CMOS Analog Swi (15 Socket Str. (17 Socket Str. (17 Socket Str. (17 Socket Str. (18 Socket Str	tch p p p p tel act	Mot AMP AMP AMP St St St St St St St

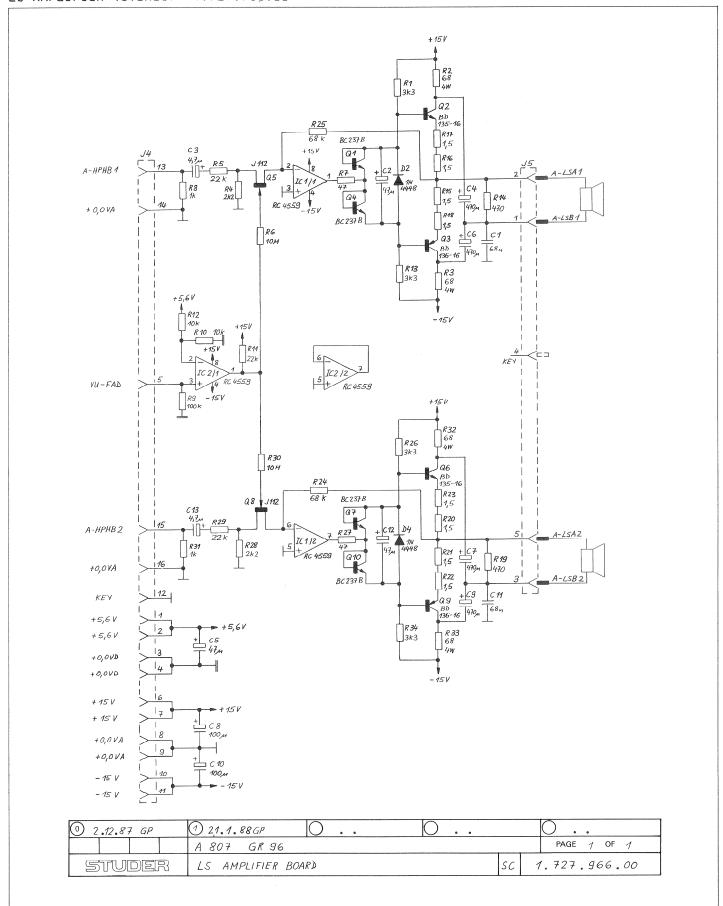




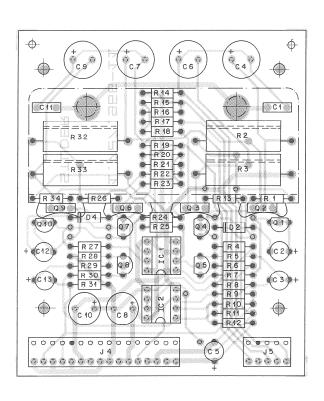
# MONITOR WITH VU-METERS (STEREO) 1.727.965.00

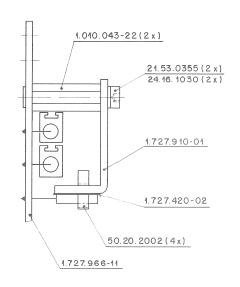
NO. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQ		MANUF.	IND.	POS.NO.	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MAN
R6 R7 R8 R9 R10 R11 R12 R13 R14 R15 R17 R19 R17 R18 R19 R17 R18 R19 R17 R18 R19	57.11.3203 57.11.4103 57.11.4332 57.11.4474 58.01.4474 57.11.4472 57.11.4472 57.11.4452 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4391 57.11.4393 57.11.4393	20 kOhm 10 kOhm 3-3 kOhm 470 kOhm 470 kOhm 1-9 k	1% 0.25% MF 2% 0.25% MF 2% 0.25% MF 2% 0.25% MF 10% 0.5 % PCorm 2% 0.25% MF				XIC11 XIC12 XIC13 XIC13 XIC15 XIC15 XIC16 XIC17	53.03.0167 53.03.0166 53.03.0166 53.03.0167 53.03.0167 53.03.0167 53.03.0167 53.03.0167	14-Pole 8-Pole 8-Pole 14-Pole 14-Pole 14-Pole	IC Socket		
R2c R27 R29 R30 R31 R32 R34 R35 R34 R36 R37 R38 R39	57-11-46d2 57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-4473 57-11-4682 57-11-4613 57-11-4473 57-11-4473 57-11-4472 57-11-4473	6-8 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 3-3 kOhm 10 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm 4-7 kOhm	2% 0.25H, MF 2% 0.25H, MF			MF=Meta	I Film, PC TURER: AMP Mot	·lectrolytic, Pt erm=Pot. Germet =AMP, Gl=Genera =Motorola,NS=NA Raytheon, St=St	, 1 Instrument tional Semid	·, Si=Silicon, :, IIT=Intermetal onductors , Ph=P	l. hilips•	
R41 R42	57-11-4473 57-11-4472	47 kOhm 4.7 kUhm MONITOR V	2%, 0.25W, MF 2%, 0.25W, MF	1.727.965.00	PAGE 4	ORIG 88		) 88/01/05 GP	MONITOR \	AL BOARD	1 - 72 7 - 965 - 00	PAGE
. 5 5 5 7 700	//33 98		4004		. AGE 4	,,,,,	(00	. 50,02,01 05			X-72 + 8 90 3 8 00	
ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQ		MANUF.							
R • • • • 43 K • • • • 44 K • • • • 45	57-11-4103 57-11-4103 57-11-4473	10 kOhm 10 kOhm 47 kOhm	2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF									
R • • • • 40 R • • • • 47 K • • • • 43	57.11.4332 57.11.4391 57.11.4332	3.3 kOhm 390 Dhm 3.3 kOhm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R****49 R****50 R****51 R****52	57.11.4391 57.11.4332 58.01.9203 57.11.3203	3.3 kühm 20 kühm 20 kühm	2% 0.25% MF 10% 0.5 W. PCerm 1% 0.25% MF									
R * * * * 5 3 R * * * * 5 4 R * * * * 5 5 R * * * * 5 6	57.11.3203 57.11.4103 57.11.3203 57.11.3203	20 kühm 10 kühm 20 kühm 20 kühm	1%, 0.25W, MF 2%, 0.25W, MF 1%, 0.25W, MF 1%, 0.25W, MF									
R58 R58 R59	57.11.4103 57.11.4332 57.11.4474	10 k0hm 3∙3 k0hm 470 k0hm	2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF									
R60 R61 R62 R63	58.01.9203 57.11.4472 57.11.4182 57.11.4151	20 kOhm 4.7 kOhm 1.8 kOhm 150 Ohm	10%+ 0.5 W+ PCerm 2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF									
R *** * 65 R *** * 65 R *** * 67	57-11-3202 57-11-3751 57-11-4332 57-11-4221	2 kühm 750 ühm 3.3 kühm 220 ühm	1%, 0.25W, MF 1%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R • • • • 6 8 R • • • • 6 9 R • • • • 7 0	57.11.4221 57.11.4473 57.11.4473	220 Ohm 47 kOhm 47 kOhm	2%+ 0.25H+ HF 2%+ 0.25H+ MF 2%+ 0.25H+ MF									
K • • • • 71 R • • • • 72 R • • • • 73 R • • • • 74	57 • 11 • 41 53 57 • 11 • 41 53 57 • 11 • 41 53 57 • 11 • 42 72	15 kOhm 15 kOhm 15 kOhm 2•7 kOhm	2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF 2%+ 0.25W+ MF									
R • • • • 75 R • • • • 76 R • • • • 77	57.11.4391 57.11.4391 57.11.4391	390 Ohm 390 Ohm 390 Ohm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R79 R79	57.11.4223 57.11.4223 1 88/01/05 GP	22 kOhm 22 kOhm MONITOR V	2% 0.25W MF	1.727.965.00	PAGE 5							
ND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQI	JIVALENT	MANUF.							
R * * * * * 80 R * * * * 81 R * * * * 82	57.11.4682 57.11.4682 57.11.4682	6.8 kDhm 6.8 kDhm 6.8 kDhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R84 R85	57.11.4103 57.11.4103 57.11.4103	10 kOhm 10 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R * * * * * 86 R * * * * 07 R * * * * 88 R * * * * 89	57.11.4103 57.11.4332 57.11.4682 57.11.4103	10 kOhm 3.3 kOhm 6.8 kOhm 10 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R****90 R****91 R****92	57-11-4103 57-11-4103 57-11-4103	10 kühm 10 kühm 10 kühm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R * * * * * 93 R * * * * 94 R * * * * 95 R * * * * 96	57.11.4103 57.11.4103 57.11.4103 57.11.4332	10 kOhm 10 kOhm 10 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
R • • • • 97 R • • • • 98 R • • • • 99 R • • • 100	57-11-4391 57-11-4391 57-11-4332 57-11-4332	390 Ohm 390 Ohm 3.3 kOhm 3.3 kOhm	2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF 2%, 0.25W, MF									
X81 X82 X93	53.04.0107 53.04.0107 53.04.0107	, , , , , , , , , , , , , , , , , , ,	Lamp holder Lamp holder Lamp holder									
X84 XIC1	53.04.0107 53.03.0166	8-Pole	Lamp holder IC Socket									
XIC+++2 XIC+++3 XIC+++4 XIC+++5	53.03.0166 53.03.0167 53.03.0168 53.03.0166	8-Pole 14-Pole 16-Pole 8-Pole	IC Socket IC Socket IC Socket IC Socket									
XIC 6 XIC 7 XIC 8	53.03.0167 53.03.0167 53.03.0167	14-Pole 14-Pole 14-Pole	IC Socket IC Socket IC Socket									
XIC9 XIC10	53.03.0166 53.03.0166	8-Pole 8-Pole	IC Socket IC Socket U BOARD	1.727.965.00								

# LS AMPLIFIER (STEREO) 1.727.966.00



## LS AMPLIFIER (STEREO) 1.727.966.00





IND.	POS.*NO.	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANUF.
					0.70	
	C * * * * 1	59.06.0683	68 nF		PETP	
	C2	59.22.3470	47 uF		EL FI	
	C * * * * * 3	59.22.8479	4,7 uF			
	C 4	59.22.4471	470 uF		EL	
	C5	59.22.3470	47 uF		EL	
	C 6	59.22.4471	470 uF		EL	
	C * * * * * 7	59.22.4471	470 uF		EL	
	C 8	59.22.5101	100 uF		EL	
	C 9	59.22.4471	470 uF		EL	
	C10	59.22.5101	100 uF		EL	
	C11	59.06.0583	68 nF		PETP	
	C * * * * 12	59.22.3470	47 uF		EL	
	C 13	59.22.8479	4,7 uF	-20% 50 V	EL	
	D1			not used		
	D Z	50.04.0125	1N4448	50 V	SI	
	0 3			not used		
	D * * * * * 4	50.04.0125	1N4448	50 V	SI	
	D 5			not used		
	D 6			not used		
	ICassal	50.09.0107	RL 4559	DUAL OP.AMP.		Ra
	IC2	50.09.0107	RC 4559	DUAL OP.AMP.		Ra
	J 4	54-01-0294	16-POLE	CIS Socket Str		AMP
	J5	54.01.0283	5-POLE	CIS Socket Str	ip	AMP
	MP 1	21.53.0355	2 pcs	Screw M3≏8mm		
	MP2	24.16.1030	2 pcs	Washer		
	MP 3	50.20.2002	4 pcs	Clip. T0126		Ph
	MPococt	1.010.043.22	2 pcs	Rivet Nut M302	Omm	S t.
	MP5	1.727.420.02	1 pcs	Thermoplastic		St
	MP 6	1.727.910.01	1 pcs	Heatsink		St
	MP 7	1.727.966.10	0 pcs	No.Label		St
	MP8	1.727.966.11	1 pcs	LS Amplifier P	CB	St
	Q1	50.03.0436	BC237B	BC547B NPN		
s T U	DER (	01) 88/01/21 GP	LS AMPLI	FIER BOARD	1.727.966.00	PAGE 1

INO.	P05+N0+	PART NO.	VALUE	SPECIFICATIONS / EQU	I VAL ENT	MANUF.
	Q====2	50.03.0495	BD135-16	NPN		
	Q3	50.03.0510	80136-16	PNP		
	Q 4	50.03.0436	BC 2 3 7 B	BC547B NPN		
	Q5	50.03.0350	MPF4392	J112 FET		Mot
	9 6	50.03.0495	BD135-16	BC547B NPN		
	9 7	50.03.0436	BC237B			Mot
	Q 8	50.03.0350	MPF4392	J112 FET		MOT
	09	50.03.0510	BD136-16	PNP		
	Q10	50.03.0436	BC2378	BC547B NPN		
	R1	57-11-3332	3-3 kOhm	1% 0.25W MF		
	R 2	57.56.5680	68 Dhm	5%, 4 W, Wire		
	R 3	57.56.5680	68 Ohm	5%, 4 W. Wire		
	R 4	57 - 11 - 3222	2,2 k0hm	1%, 0.25H, MF		
	R 5	57.11.3223	22 kOhm	1%, 0.25W, MF		
	R 6	>7.11.5106	10 MOhm	5%, 0.25W, Mf		
	R * * * * * 7	57.11.3470	47 Ohm	1%, 0.25W, MF		
	R 8	57.11.3102	1 kOhm	1%, 0.25W, MF		
	R 9	57.11.3104	100 kOhm	1%, 0.25W, MF		
	R 10	57.11.3103	10 kOhm	1%, 0.25W, MF		
	R 11	57-11-3223	22 kOhm	1%, 0.25W, MF		
	R 12	57-11-3103	10 kOhm	1%, 0.25W, MF		
	R 13	57.11.3332	3.3 kOhm	1%, 0.25W, MF		
	R 14	57-11-3471	470 Ohm	1%, 0.25W, MF		
	Rees. 15	57.11.3159	1.5 Ohm	1%, 0.25W, MF		
	R * * * * 16	57.11.3159	1.5 Ohm	1%, 0.25W, MF		
	R 17	57.11.3159	1.5 Ohm	14, 0.25W, MF		
	R 18	57.11.3159	1-5 Ohm	1%, 0.25W, MF		
	R19	57.11.3471	470 Ohm	1%, 0.25W, MF		
	R 20	57.11.3159	1.5 Ohm	1%, 0,25W, MF		
	R = = = 21	57.11.3159	1 = 5 Ohm	1%, 0.25W, MF		
	R * * * * Z Z	57-11-3159	1.5 Ohm	1%, 0.25W, MF		
	R * * * * 23	57.11.3159	1.5 Ohm	1%, 0.25W. MF		
(00)	R = = = 24	57-11-3223	22 kOhm	1%, 0.25W; MF		
(01)	R * * * * 24	57.11.3683	68 kOhm	1%, 0.25W, MF		
(00)	R * * * * 25	57.11.3223	22 kOhm	1%, 0.25W, MF		
(01)	R * * * * 25	57-11-3683	68 kOhm	1%, 0.25W, MF		
STU	D E R (01)	88/01/21 GP	LS AMPLIF	TER BOARD	1.727.966.00	PAGE 2

I ND .	PRS.NO.	PART NO.	VALUE	SPECIFICATIONS / FOUTVALENT	MANUF.
	B===26	57-11-3332	3.3 kOhm	1%- 0-25W- ME	
	R 27	57.11.3470	47 Ohm	1% 0.25W: MF	
	B = = = 28	57.11.3222	2.2 kOhm	1% 0.25W MF	
	R 29	57.11.3223	22 kOhm	14. 0.25W. MF	
	R 30	57.11.5106	10 MOhm	5%, 0.25W, Mf	
	R 31	57-11-3102	1 kOhm	1%, 0.25W, MF	
	R 32	57.56.5680	68 Ohm	5%, 4 W, Wire	
	R 33	57.56.5680	68 Ohm	5%, 4 W, Wire	
	R 34	57-11-3332	3-3 kOhm	1%, 0.25W, MF	
	XIC1	53.03.0166	8 Pole	IC Socket	
	XIC 2	53.03.0166	8 Pole	IC Socket	

(Ol) Encrease of yain. CFR=Coramic, F1=F1ectrolytic, PFTP=Polyester, S1=Silicon, MF=Metal Film. MANUFACTURER: AMP=AMP+Mot=Motorola-Ph=Philips+Ra=Raytheon+St=Studer.

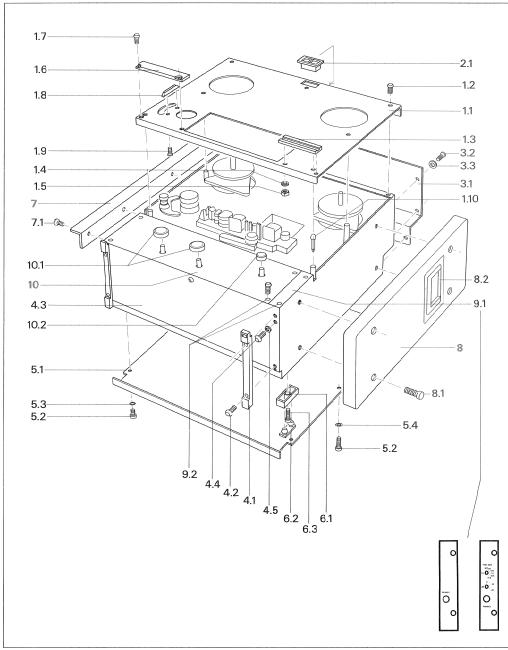
ORIG 87/11/30 (01) 88/01/21

S T U D E R (01) 08/01/21 GP LS AMPLIFIER BOARD 1 • 72 7 • 966 • 00 PAGE 3

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STUDER A807

8.1 VERKLEIDUNG UND ZUBEHOER/COVERS AND ACCESSOIRES



#### VERKLEIDUNG UND ZUBEHOER

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1.1		1.727.100.07 1.727.091.01 1.727.120.00	Laufwerkabd. mit Monitor Laufwerkabd. ohne Monitor Monitorlautsprecher kpl.
1.2		21.51.8455 1.727.100.42	Lin-Schraube IS M4x8 Klebeschiene
1.4		24.16.1030	Sicherungsscheibe D3,2/5,5
1.5		22.01.8030	6kt. Mutter M3
1.6		1.727.100.37	Pot Meter Abdeckung mit Klebeschiene
1.7		1.010.010.21	Lin-Schraube IS M4x8 spez.
1.8		1.811.090.20 20.01.2153	Bandanlauf S-Blechschraube D2,9x6,5
1.10		1.077.100.20	Gummi kappe
2.1		55.12.0001	Netzschal ter
3.1 3.2 3.3		1.727.161.01 1.010.007.21 24.16.1030	Rückwand / Anschlussschiene Lin Schraube IS M4x8 SW Sicherungsscheibe D3,2/5,5
4.1 4.2		1.727.100.10 1.010.007.21	Kunststoffüsse Lin Schraube IS M4x8 SW
4.3		1.727.100.06	Abdeckblech audio
4.4		1.010.042.21	Lin Schraube IS M4x6
4.5		24.16.2040	Fächerscheibe D4,3
5.1		1.727.100.05	Bodenblech
5.2		1.010.007.21 24.16.1030	Lin Schraube IS M4x8 SW Sicherungsscheibe D3,2/5,5
5.4		24.16.2040	Fächerscheibe D4,3
6.1		1.177.930.08	Fuss
6.2		1.067.010.08 21.53.0356	Gummieinlage Z-Schraube IS M3x10
7 7.1		.1.727.071.00 21.51.2454	19" Rackwinkel Set (Option) S-Schraube IS M4x6
8		1.727.070.00	Holzseitenwand Set (Option)
8.1		21.53.0511 1.810.077.04	Z-Schraube IS M5x22 Klappgriffe kpl.
9.1		1.727.011.01 1.727.440.05	Abdeckung Standard Abdeckung Testgenerator
9.2		1.010.047.21	Lin Schraube M4x8
10			Audio-Frontabdeckung (Varianten-abhängig) Best.Nr.siehe nächste Seite
10.1		1.727.100.43 1.727.100.33	Drehknöpfe gross Drehknöpfe klein
10.2		1.121.100.33	DI ENKNOPTE KIEIII

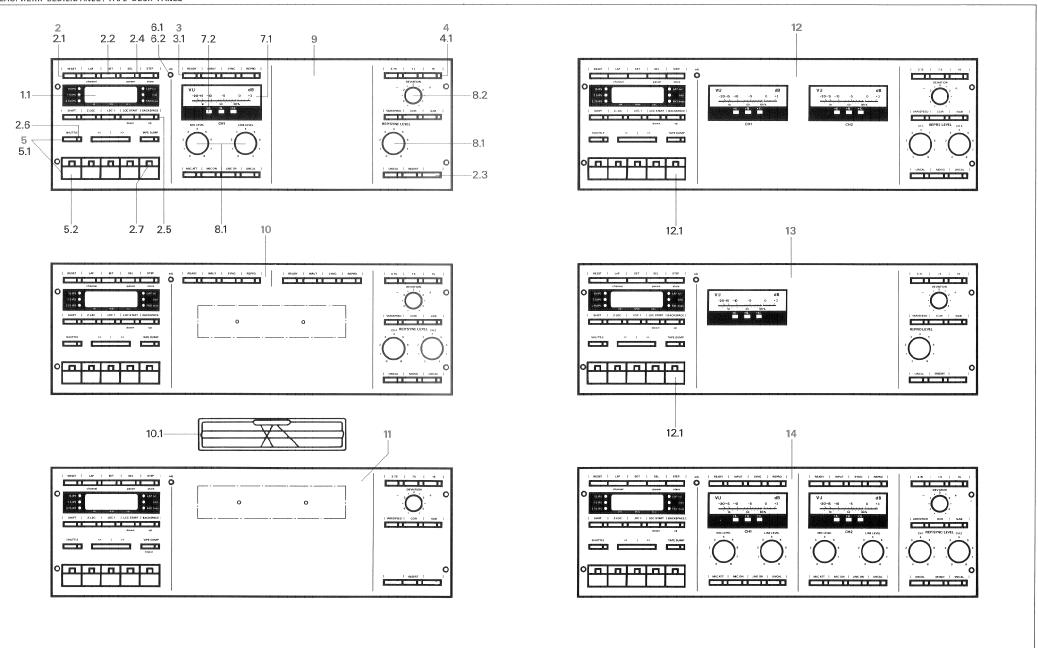
#### COVERS AND ACCESSOIRES

POS	ПТY	DRDER NUMBER	PART NAME SPECIFICATION
1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9		1.727.100.07 1.727.091.01 1.727.120.00 21.51.8455 1.727.100.42 24.16.1030 22.01.8030 1.727.100.37 1.010.010.21 1.811.090.20 20.01.2153 1.077.100.20	Tape transport cover with MONITOR Tape transport cover without MONITOR Monitor-loudspeaker compl. Oval head screw IS M4x8 Splicing block Lock washer D3.2/5.5 Hexanut M3 Cover plate w.splicing block Screw IS M4x8 Threading quide Screw D2.9x6.5 Cap
2. 1		55.12.0001	Slide switch
3.1 3.2 3.3		1.727.161.01 1.010.007.21 24.16.1030	Top cover Screw IS M4x8 Lock washer D3.2/5.5
4.1 4.2 4.3 4.4 4.5		1.727.100.10 1.010.007.21 1.727.100.06 1.010.042.21 24.16.2040	Fcotrail Screw IS M4x8 Bctton cover Screw IS M4x6 Lcck washer D4.3
5.1 5.2 5.3 5.4		1.727.100.05 1.010.007.21 24.16.1030 24.16.2040	Rear cover Screw IS M4x8 Lock washer D3.2/5.5 Lock washer D4.3
6.1 6.2 6.3		1.177.930.08 1.067.010.08 21.53.0356	Foot Foot insert grey Z-Screw IS M3x10
7 7.1		1.727.071.00 21.51.2454	19" Rack rail set (cption) S-Screw IS M4x6
8 8.1 8.2		1.727.070.00 21.53.0511 1.810.077.04	Set of wooden side panels (option) Z-Screw IS M5x22 Handle compl.
9.1		1.727.011.01 1.727.440.05	Jack socket cover (standard) Jack socket cover with testgenerator
9.2		1.010.047.21	Screw M4x8
10.1 10.2		1.727.100.43 1.727.100.33	Audio-Frontpanel (according to different versions) / Order-Number following page Push button Rotary knob varispeed

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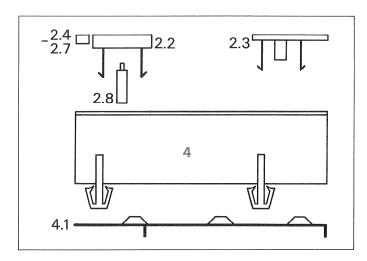
8/2

8.2 LAUFWERK BEDIENPANEL / TAPE DECK PANEL



# PANELS

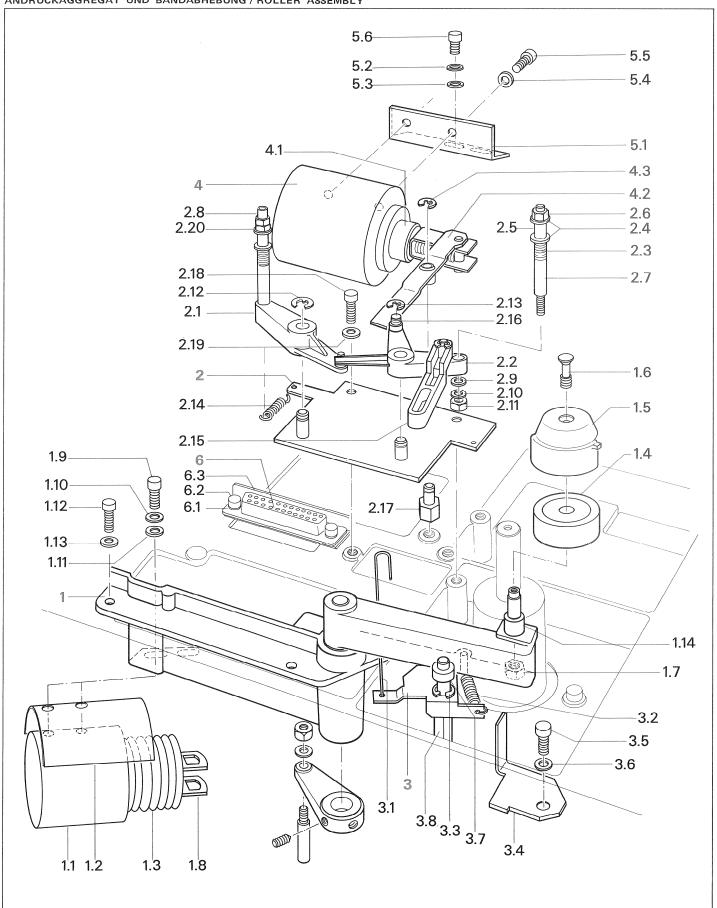
POS	GTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1.1		1.727.100.40 1.727.015.02	Anzeigefenster 3,75-15ips Anzeigefenster 7,5 -30ips
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8		1.011.235.05 1.011.235.25 1.011.235.30 1.011.235.35 1.011.235.31 1.011.235.33 1.011.235.34 1.011.235.32	Tastengehäuse (5-Tasten) Schaltmatte (5 Kontakte) Druck-Taste Blind-Taste Blind-Kalotte Kalotte gelb Kalotte grün Kalotte rot Bolzen
3 3.1		1.011.235.04 1.011.235.24	Tastengehäuse (4 Tasten) Schaltmatte (4 Kontakte)
4 4.1		1.011.235.03 1.011.235.23	Tastengehäuse (3 Tasten) Schaltmatte (3 Kontakte)
5 5.1 5.2		1.727.360.02 1.727.360.03 1.727.360.04 1.727.360.06	Tastengehäuse Schaltmatte Drucktaste gross Schildersatz
6.1 6.2		1.727.360.05 55.15.0130	Adjust-Tastenverlängerung Adjust-Schalter
7 7.1 7.2		1.727.360.01 51.02.0144 50.04.2119	VU-meter VU-meter-Beleuchtungs- lämpchen 6V/0.03A Peak LED
8.1 8.2		1.727.100.43 1.727.100.33	Drehkopf gross Drehknopf klein
9		1.727.100.26	Bedienpanel Mono
10 10.1		1.727.100.23 1.820.110.18	Bedienpanel 2/2 Klebeschiene (Option)
11		1.727.100.25 1.727.015.01	Bedienpanel OVU Bedienpanel OVU / HS
12 12.1		1.727.100.27 1.727.364.01	Bedienpanel nur Wiedergabe Tastenschild unbeschriftet
13		1.727.100.29	Bedienpanel nur Wieder- gabe Mono
14		1.727.100.24 1.727.064.01	Bedienpanel 2VU Bedienpanel 2VU / HS



## PANELS

POS	QTY	ORDER NUMBER	PART NAME SPEZIFIKATION
1.1		1.727.100.40 1.727.015.02	Display 3.75-15ips Display 7.5 -30ips
2		1.011.235.05	Push button housing for 5 push button
2.1		1.011.235.25	Switching rubber activater mat for 5 push button
2.2 2.3 2.4 2.5 2.6 2.7 2.8		1.011.235.30 1.011.235.35 1.011.235.31 1.011.235.33 1.011.235.34 1.011.235.32	Push button Push button cover cap Filler cover Cover yellow Cover green Cover red Bolt
3		1.011.235.04	Push button housing for 4 push buttons
3.1		1.011.235.24	Switching rubber activater mat for 4 push button
4		1.011.235.03	Push button housing for 3
4.1		1.011.235.23	Switching rubber activater mat for 3 push button
5 5.1		1.727.360.02 1.727.360.03	Push button housing Switching rubber activater mat
5.2		1.727.360.04 1.727.360.06	Push button large Label set
6.1 6.2		1.727.360.05 55.15.0130	Adjust-Extension Adjust-push button switch
7 7.1 7.2		1.727.360.01 51.02.0144 50.04.2119	VU-meter Vu-meter-bulb 6V/0.03A Peak LED
8.1 8.2		1.727.100.43 1.727.100.33	Push button large Push button small
9		1.727.100.26	Cover plate for operating panel mono
10 10.1		1.727.100.23 1.820.110.18	Audio-frontcover plate Splicing block (Option)
11		1.727.100.25	Cover plate for operating panel without VU-meter
		1.727.015.01	Frontcover plate OVU / HS
12		1.727.100.27	Frontpanel-cover for playback only version
12.1		1.727.364.01	Blanc label
13		1.727.100.29	Frontpanel-cover for mono playback only version
14		1.727.100.24 1.727.064.01	Frontcover plate 2VU Frontcover plate 2VU / HS

8.3
ANDRUCKAGGREGAT UND BANDABHEBUNG / ROLLER ASSEMBLY



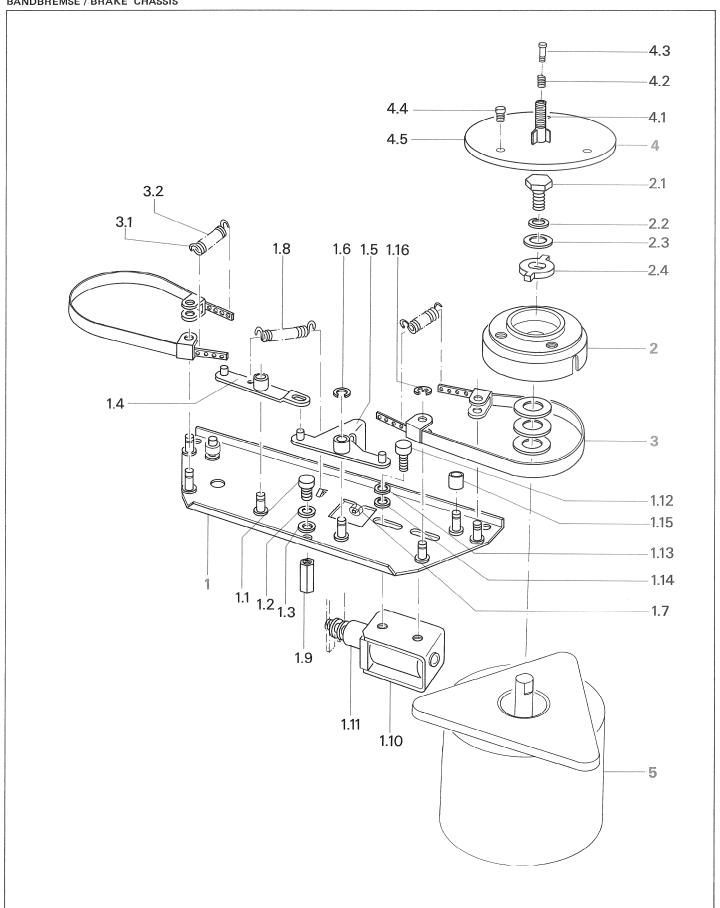
## ANDRUCKAGGREGAT UND BANDABHEBUNG

THE		AGGREGAT UND	BANDABHEBUNG
POS	GTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.135.81 1.014.718.00 1.810.100.09 1.810.100.08 1.167.178.82 1.727.136.00 1.010.048.21 22.01.5040 1.810.101.00 21.53.0455 24.16.1040 23.01.2043 21.53.0456 24.16.1040 1.727.135.01	Andruckaggregat kpl. Andruckmagnet Abschirmung Gummibalg Andruckrolle Andruckrollendeckel kpl. S-Schraube IS 6kt.Mutter M4x0,5 Anker kpl. Schraube IS,ZN M4x8 Sicherungsscheibe D4,3/7 U-Scheibe D4,3/9x0,8 Schraube IS,ZN M4x10 Sicherungsscheibe D4,3/7 Andruckachse
2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10 2.11 2.13 2.13 2.14 2.15 2.16 2.17 2.18 2.17 2.18 2.17 2.19		1.727.115.00 1.810.133.00 1.810.132.00 1.020.820.12 1.810.130.13 1.810.130.10 1.727.115.02 23.01.1032 24.16.1030 22.01.5030 24.16.3040 24.16.3040 24.16.30.12 1.727.115.01 1.810.130.12 1.727.115.01 1.810.090.10 21.53.0353 24.16.1030 22.15.8030	Bandabhebung kpl. Lifterarm links kpl. Lifterarm rechts kpl. Druckfeder Bandführungsscheibe Distanzhülse 6Kt. Stop-Mutter M3 Lifterbolzen Abschlussmutter U-Scheibe D3,2/6 Sicherungsscheibe D3,2/5,5 6Kt. Mutter M3 Clip Clip Zugfeder Lasche Rolle Bolzen Schraube IS ZN M3x5 Sicherungsscheibe D3,2/5,5 6kt. Mutter M3
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8		1.727.130.00 1.727.100.48 1.077.100.13 24.16.3040 1.727.100.59 21.53.0454 24.16.1040 1.067.170.14 1.727.100.47	Sperrklinke kpl. Auslöse-Gestänge Zugfeder Seegerring D4 Entriegelungswinkel für Andruckarm Schraube IS ZN M4x6 Sicherungsscheibe D4,3/7 Dämpfungsgummi Bolzen
4 4.1 4.2 4.3		1.014.718.00 1.810.136.00 1.810.135.00 24.16.3032	Liftermagnet kpl. Anker kpl. Hebel kpl. Seegerring D3
5.1 5.2 5.3 5.4 5.5 5.6		1.810.090.09 24.16.1040 23.01.1043 24.16.1040 21.53.0453 21.51.8455	Befestigungswinkel Sicherungsscheibe D4,3/7 Unterlagsscheibe D4,3/8 Sicherungsscheibe D4,3/7 Schraube M4x5 Z-Schraube IS M4x8
6.1 6.2 6.3		1.727.211.00 1.727.209.00 1.727.210.00 54.02.0442 54.02.0450 54.02.0454 24.16.1030 21.51.8354 1.727.209.07	Kabelbaum kpl. Mono Kabelbaum kpl. Stereo Kabelbaum kpl. Stereo Kabelbaum kpl. Stereo mit 2.Repro-Kopf Kopfträger Steckergehäuse D-Type 25pol Crimp-Kontakte für 0,22 mm² Draht Crimp-Kontakte für 0,56 mm² Draht Sicherungsscheibe D3,2/5,5 Schraube LS IS M3x6 Zugentlastung

## ROLLER ASSEMBLY

personan manage	OLLER ASSEMBLY			
POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION	
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.135.81 1.014.718.00 1.810.100.09 1.810.100.08 1.167.178.82 1.727.136.00 1.010.048.21 22.01.5040 1.810.101.00 21.53.0455 24.16.1040 23.01.2043 21.53.0456 24.16.1040 1.727.135.01	Pressure aggregat compl. Solenoid Shield Rubber bellows Pinch roller Pressure roller cover compl. S-Screw IS Hex nut M4x0,5 Plunger compl. Screw IS ZN M4x8 Lock washer D4,3/7 Washer D4,3/9 x0,8 Screw IS ZN M4x10 Lock washer D4,3/7 Pressure roller shaft	
2 2.1 2.2 2.3 2.4 2.5 2.7 2.10 2.11 2.12 2.14 2.15 2.14 2.15 2.15 2.16 2.19 2.20		1.727.115.00 1.810.133.00 1.810.132.00 1.020.820.12 1.810.130.09 22.99.0112 1.810.130.10 1.727.115.02 23.01.1032 24.16.1030 22.01.5030 24.16.3040 24.16.3040 24.16.3019 1.020.250.21 1.810.130.12 1.727.115.01 1.810.090.10 21.53.0353 24.16.1030 22.15.8030	Tape lifting compl. Lifter lever left compl. Lifter lever right compl. Pressure spring Guide washer Guide bushing Self locking nut M3 Lifter bolt Hex nut Washer D3,2/6 Lock washer D3,2/5,5 Hex nut M3 Circlip Circlip Circlip Tension spring Fish plate Roller Bold Screw IS ZN M3x5 Lock washer D3,2/5,5 Hexanut M3	
3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8		1.727.130.00 1.727.100.48 1.077.100.13 24.16.3040 1.727.100.59 21.53.0454 24.16.1040 1.067.170.14 1.727.100.47	Stop pawl compl. Connecting rod Brake tension spring Circlip D4 Edit lever retainer Screw IS ZN M4x6 Lock washer D4,3/7 Rubber tube Bold	
4 4.1 4.2 4.3		1.014.718.00 1.810.136.00 1.810.135.00 24.16.3032	Solenoid compl. Plunger compl. Lever compl. Circlip D3	
5.1 5.2 5.3 5.4 5.5 5.6		1.810.090.09 24.16.1040 23.01.1043 24.16.1040 21.53.0453 21.51.8455	Mounting bracket Lock washer D4,3/7 Washer D4,3/8 Lock washer D4,3/7 Screw M4x5 Z-Screw IS M4x8	
6.1		1.727.211.00 1.727.209.00 1.727.210.00 54.02.0442 54.02.0450 54.02.0454 24.16.1030	Cable harness compl. mono Cable harness compl. stereo Cable harness compl. stereo with 2.Repro-head Chassis receptacle housing 25p Crimp-contact for 0,22 mm² cable Crimp-contact for 0,56 mm² cable Lock washer D3,2/5,5	
6.2 6.3		21.51.8354 1.727.209.07	Screw LS IS M3x6 Cable harness tie on bracket	

8.4 BANDBREMSE / BRAKE CHASSIS



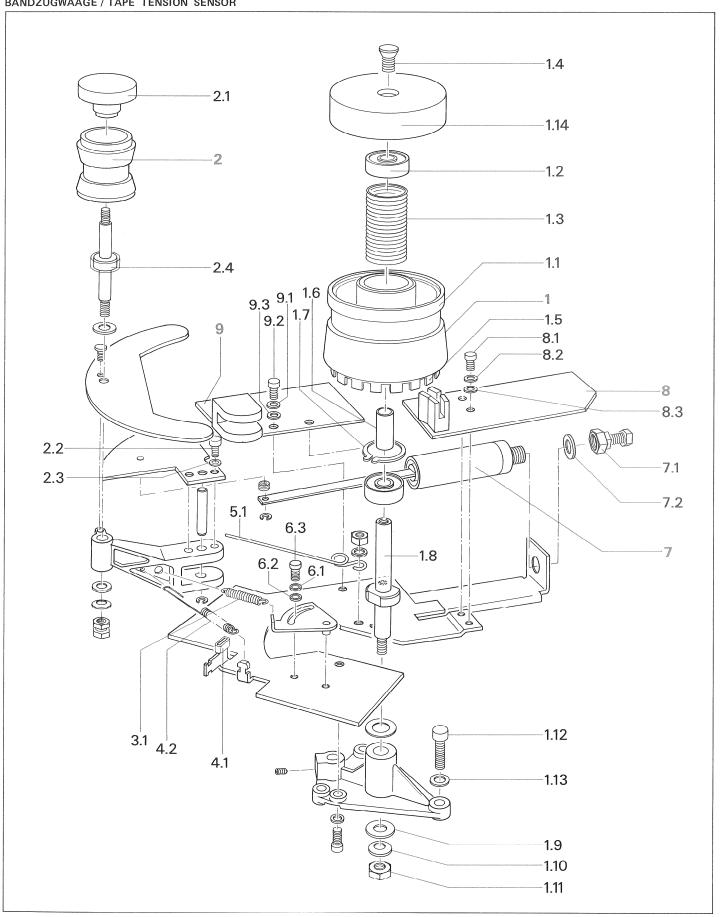
## BANDBREMSE

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15		1.077.404.00 21.53.0354 24.16.1030 23.01.2032 1.077.415.00 1.077.411.00 24.16.3032 1.067.100.36 1.062.210.06 1.010.139.27 1.014.852.00 1.014.854.00 21.53.0353 24.16.3032 23.01.2032 1.067.170.14 24.16.3032	Bremschassis kpl.  Z-Schraube IS M3x6 Sicherungsscheibe D3.2/5.5 U-Scheibe D3,2/7 xO,5 Bremshebel links Bremshebel rechts Clip Anschlagschlauch Feder Bremshebel links Befestigungsbolzen Laufwerkchassis Bremsmagnet Anker kpl. Z-Schraube IS M3x5 Sicherungsscheibe D3,2/5,5 U-Scheibe D3,2/7 xO,5 Dämpfungsgummi Seegerring 3,2
2		1.067.242.00	Bremsrolle kpl.
2.1		21.01.4455	Schraube 6kt. M4x8
2.2		24.16.1040	Sicherungsscheibe D4,3/7
2.3		23.01.3043	U-Scheibe D4,3/12 x1
2.4		1.067.100.27	Mitnehmerscheibe
3		1.167.866.00	Bremsband kpl.
3.1		1.077.100.13	Bremsfeder
3.2		1.727.100.90	Dämpfungsschlauch
4		1.067.638.00	Wickelteller kpl.
4.1		1.067.688.01	3 Zack-Hülse
4.2		1.067.688.02	Druckfeder
4.3		1.062.390.02	Schaftschraube
4.4		21.51.0355	Z-Schraube IS M3x8
4.5		1.077.567.01	Wickelteller
5		1.021.250.00	Wickelmotor kpl.

## BRAKE CHASSIS

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13 1.14 1.15		1.077.406.00 21.53.0354 24.16.1030 23.01.2032 1.077.415.00 1.077.411.00 24.16.3032 1.067.100.36 1.062.210.06 1.010.139.27 1.014.852.00 1.014.854.00 21.53.0353 24.16.3032 23.01.2032 1.067.170.14 24.16.3032	Brake chassis compl. Z-Screw IS M3x6 Lock washer D3.2/5.5 Washer D3.2/7 x0.5 Brake lever left Brake lever right Circlip Stop tube Return spring Spacer bolt Brake solenoid Plunger compl. Z-Screw IS M3x5 Circlip D3.2/5.5 Washer D3,2/7 x0,5 Rubber tube Circlip 3.2
2 2.1 2.2 2.3 2.4		1.067.242.00 21.01.4455 24.16.1040 23.01.3043 1.067.100.27	Brake drum compl. Screw hex M4x8 Lock washer D4.3/7 Washer D4.3/12 x1 Cam disc
3 3.1 3.2		1.167.866.00 1.077.100.13 1.727.100.90	Brake band compl. Brake tension spring Rubber tube
4 4.1 4.2 4.3 4.4 4.5		1.067.688.00 1.067.688.01 1.067.688.02 1.062.390.02 21.51.0355 1.077.567.01	Spooling plate compl. Cine centre sleeve Cine centre spring Cine centre shaft screw Z-Screw IS M3x8 Spooling plate
5		1.021.250.00	Spooling motor compl.

8.5 BANDZUGWAAGE/TAPE TENSION SENSOR



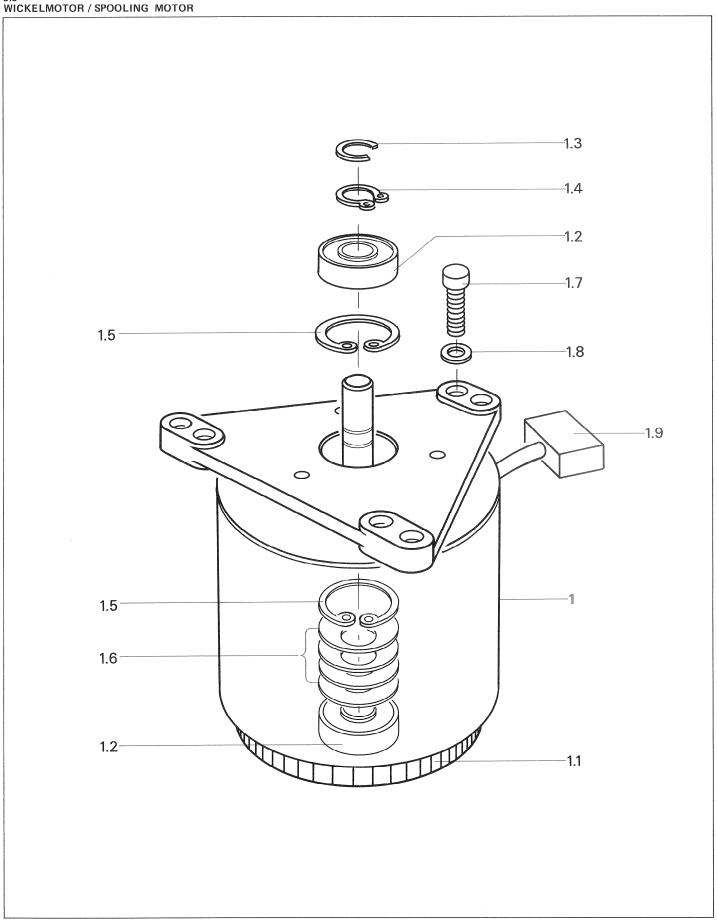
# BANDZUGWAAGE

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13		1.727.110.81 1.727.112.81 1.810.150.08 41.99.0106 1.010.091.37 21.51.2356 1.810.150.01 1.167.838.02 24.16.4160 1.811.111.06 23.01.1064 24.16.1060 22.01.8060 21.53.0357 24.16.1030 1.810.150.03	Bandzugwaage kpl. Tachorolle kpl. Tachorolle kpl. Tachorolle Kugellager Druckfeder S-Schraube IS NI M3x10 Tachoblende Distanzhülse Clip Achse U-Scheibe D6,4x11 Sicherungsscheibe D6,4x10 6kt. Mutter M6 Z-Schraube IS M3x12 Sicherungsscheibe D3,2x5,5 Tachorollendeckel
2		1.727.113.00	Umlenkrolle kpl.
2.1		1.167.831.00	Deckel
2.2		21.01.0203	Z-Schraube M2x5
2.3		24.16.1020	Sicherungsscheibe D2,2x4
2.4		1.811.110.02	Anschlag-Gummiring
3.1		1.010.032.37	Zugfeder kurz
4.1		1.067.170.14	Dämpfungsgummi
4.2		1.010.125.37	Zugfeder lang
5.1		1.727.110.03	Anschlagfeder
6.1		24.16.1030	Sicherungsscheibe D3,2x5,5
6.2		23.01.2032	U-Scheibe D3,2x7
6.3		21.53.0353	Z-Schraube IS M3x5
7		1.727.114.00	Dämpfungspumpe kpl. eingest.
7.1		22.01.5060	Mutter M6
7.2		37.02.0101	Tellerfeder D6,2x9,8
8		1.727.321.00	Move sensor BOARD kpl.
8.1		21.53.0353	Z-Schraube IS M3x5
8.2		24.16.1030	Sicherungsscheibe D3,2x5,5
8.3		23.01.2032	Unterlagsscheibe D3,2x7
9 9.1 9.2 9.3		1.727.320.00 24.16.1030 21.53.0353 23.01.2032	Tape tension sensor BOARD kpl. Sicherungsscheibe D3,2x5,5 Z-Schraube IS M3x5 Unterlagsscheibe D3,2x7

## TAPE TENSION SENSOR

POS QTY	ORDER NUMBER	PART NAME SPECIFICATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 1.10 1.11 1.12 1.13	1.727.110.81 1.727.112.81 1.810.150.08 41.99.0106 1.010.091.37 21.51.2356 1.810.150.01 1.167.838.02 24.16.4160 1.811.111.06 23.01.1064 24.16.1060 22.01.8060 21.53.0357 24.16.1030 1.810.150.03	Tacho tension sensor compl. Tacho roller compl. Tacho roller Ball bearing D5/16x6 Pressure spring Screw IS M3x10 Tacho mask Spacer Internal retaining ring D16 Shaft Washer D6.4x11 Lock washer D6.4x10 Hexanut M6 Z-Screw IS M3x12 Lock washer D3.2x5.5 Cover
2	1.727.113.00	Guide roller compl.
2.1	1.167.831.00	Cover
2.2	21.01.0203	Z-Screw M2x5
2.3	24.16.1020	Lock washer D2.2x4
2.4	1.811.110.02	Stop rubber
3.1	1.010.032.37	Tension spring short
4.1	1.067.170.14	Rubber tube
4.2	1.010.125.37	Tension spring long
5.1	1.727.110.03	Spring
6.1	24.16.1030	Lock washer D3.2x5.5
6.2	23.01.2032	Washer D3.2x7
6.3	21.53.0353	Z-Screw IS M3x5
7	1.727.114.00	Dashpot compl. adjusted
7.1	22.01.5060	Nut M6
7.2	37.02.0101	Spring washer D6.2x9.8
8	1.727.321.00	Move sensor BOARD compl.
8.1	21.53.0353	Z-Screw IS M3x5
8.2	24.16.1030	Lock washer D3.2x5.5
8.3	23.01.2032	Washer D3.2x7
9 9.1 9.2 9.3	1.727.320.00 24.16.1030 21.53.0353 23.01.2032	Tape tension sensor BOARD compl. Lock washer D3.2x5.5 Z-Screw IS M3x5 Washer D3.2x7

8.6 WICKELMOTOR / SPOOLING MOTOR



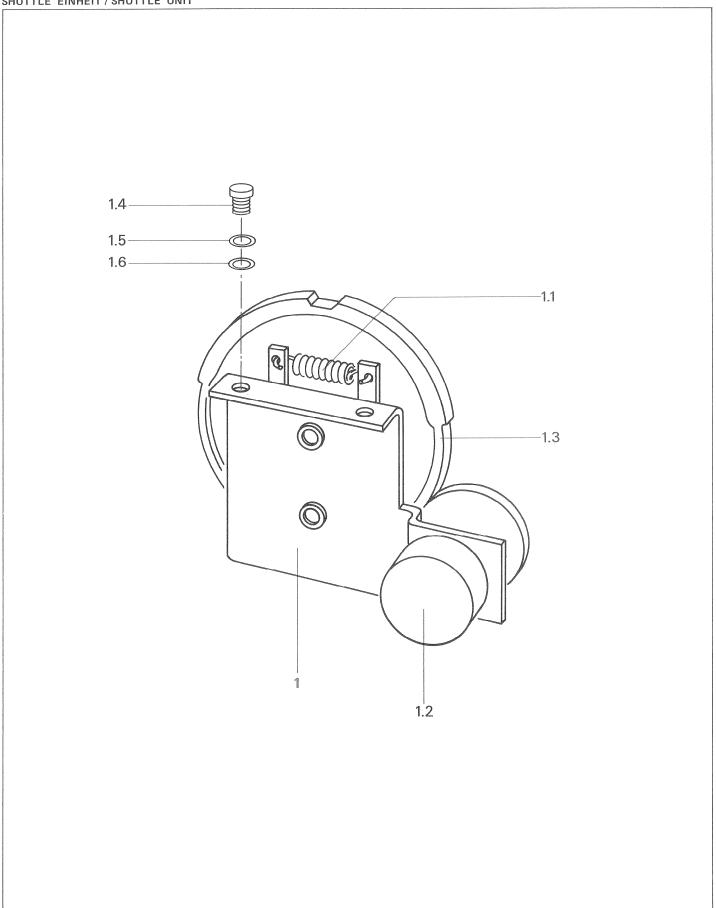
#### WICKELMOTOR

POS	GTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7		1.021.250.00 1.777.100.40 41.99.0105 1.021.256.04 24.16.5080 24.16.4220 37.02.0206 21.53.0457 24.16.1040 54.25.0303 54.01.0207	Wickelmotor kpl. Tachoblende Kugellager Clip geschliffen Clip Clip Tellerfeder Z-Schraube IS M4x12 Sicherungsschraube Steckergehäuse 3pol/16A Kontaktstift

## SPOOLING MOTOR

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
L		West and the second of the sec	
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7		1.021.250.00 1.777.100.40 41.99.0105 1.021.256.04 24.16.5080 24.16.4220 37.02.0206 21.53.0457 24.16.1040 54.25.0303	Spooling motor compl. Tacho ring Ball bearing Circlip Circlip Circlip Spring washer Z-Screw IS M4x12 Lock washer Connector shell 3pol/16A
		54.01.0207	Contact pin

8.7 SHUTTLE EINHEIT / SHUTTLE UNIT



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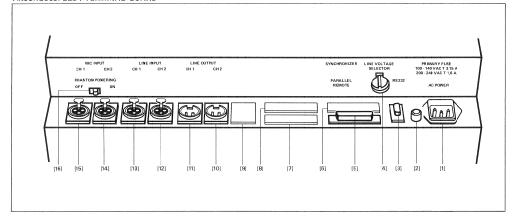
#### SHUTTLE EINHEIT

PDS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1			Shuttle-Einheit kpl.
1.1		1.010.101.37	Zugfeder
1.2		58.99.0139	Shuttle-Potentiometer
			5 kΩ/2 W
1.3		1.727.180.01	Shuttle-Rad
1.4		21.53.0354	Z-Schraube IS M3x4
1.5		24.16.1030	Sicherungsscheibe D3,2/5,5
1.6		23,01,2032	U-Scheibe D3,2

#### SHUTTLE UNIT

POS	QTY	ORDER NUMBER	PART NAME BPECIFICÁTION
1 1.1 1.2 1.3 1.4 1.5			Shuttle-unit compl. Tension spring Shuttle-potentiometer 5 kn/2 W Shuttle-wheel Z-Screw IS M3x6 Lock washer D3.2/5.5 Washer D3.2





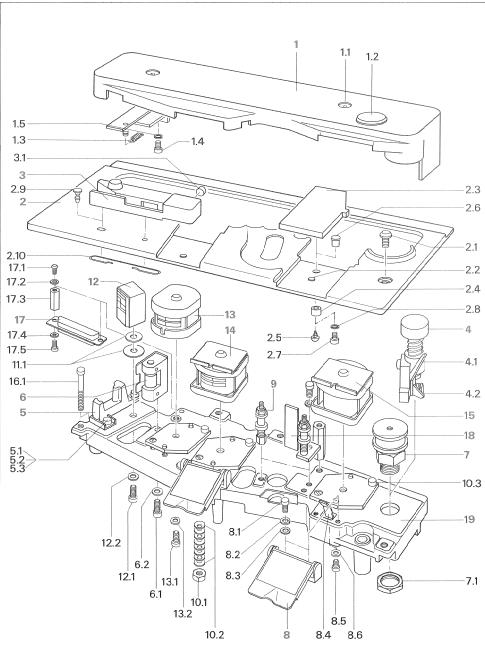
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1		54.42.0003 51.01.0119 51.01.0122	Netzsteckersockel Sicherung 1.6A (220V) Sicherung 3,15A (110V)
2		1.010.001.53	Messbuchse O V
3		1.727.245.00	Kabelbaum RS 232
4		53.03.0128	Spannungswähler
5		1.727.244.00	Kabelbaum Parallele Fernsteuerung
6		1.820.560.06 1.727.246.00	Blindabdeckung oder Kabelbaum SYNCHRONIZER
7		1.820.560.06 1.727.248.00 1.727.239.00	Blindabdeckung oder Kabelbaum Stereo-Monitor oder Kabelbaum VU-Panel Schaltsignale
8		1.820.560.06 1.727.247.00 1.727.238.00	Blindabdeckung oder Kabelbaum VU-Panel Audio Stereo oder Kabelbaum VU-Panel Audio Mono
9		1.820.560.11 1.727.091.02	Blindabdeckung oder Einbaubuchse 5-pol
10-1	1	1.727.240.00	XLR-Ausgang mit Kabel
12-1	3	1.727.241.00 1.820.560.11	XLR-Eingang mit Kabel oder Blindabdeckung
14-1	5	1.727.242.00 1.820.560.11	XLR-Mic. Eingang mit Kabel oder Blindabdeckung
16		1.727.249.00 55.12.0007 1.820.560.05	Phantom Ein/Ausschalter mit Kabel Schalter oder Blindabdeckung

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1		54.42.0003 51.01.0119 51.01.0122	Power socket Fuse 1.6A (220V) Fuse 3.15A (110V)
2		1.010.001.53	O V Terminal
3		1.727.245.00	Wire harness RS 232
4		53.03.0128	Voltage selector
5		1.727.244.00	Wire harness parallel remote control
6		1.820.560.06 1.727.246.00	Cover plate or wire harness SYNCHRONIZER
7		1.820.560.06 1.727.248.00 1.727.239.00	Cover plate or wire harn. Stereo monitor o wire harness VU-Panal switching signals
8		1.820.560.06 1.727.247.00 1.727.238.00	Cover plate or wire harness VU-panel audio stereo or wire harness VU-panel audio mono
9		1.820.560.11 1.727.091.02	Cover plate or 5-pin XLR socket f
10-1	1	1.727.240.00	XLR output incl. wire harne
12-13		1.727.241.00 1.820.560.11	XLR input incl. wire harnes or cover plate
14-15		1.727.242.00 1.820.560.11	XLR Mic-input incl.wire har or cover plate
16		1.727.249.00 55.12.0007 1.820.560.05	Phantom sw. incl.wire harne Phantom powering switch or cover plate

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#### KOPFTRAEGER

	KOPFTRAEGER				
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION		
1 1.1 1.2 1.3 1.4 1.5		1.727.125.00 1.010.036.21 1.727.125.04 1.010.025.37 21.53.0354 24.16.1030	Kopfabdeckung kpl. S-Schraube IS Abdeckkappe Zugfeder Z-Schraube IS M3x6 Sicherungsscheibe D3,2x5,5		
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10		1.727.126.00 1.010.011.21 1.179.143.03 1.727.126.02 1.727.126.03 20.23.7280 1.727.127.01 21.53.0353 24.16.1030 1.810.186.02 1.810.400.05	Kopfträgerabdeckung kpl. Lin. – Schraube IS Gummianschlag Abdeckung 2.Repro-Kopf Buchse Schraube KS D2,5 Gewindebuchse Z-Schraube IS M3x5 Sicherungsscheibe D3,2x5,5 Abdeckstopfen Feder		
3 3.1		1.810.402.81 1.337.958.05	Bandmarkierer kpl.(OPTIDN) Stempeleinsatz		
4 4-1 4-2		1.020.889.81 1.020.861.07 1.020.715.12	Bandschere kpl.(OPTION) Scherenblatt fest Scherenblatt beweglich		
5 5.1 5.2 5.3		1.050.314.00 21.53.0354 24.16.1030 23.01.1032	Lichtschranke kpl. Z-Schraube IS M3x6 Sicherungsscheibe D3,2/5,5 Unterlagsscheibe D3,2x6		
6 6.1 6.2		1.050.311.00 21.53.0355 24.16.1030	Beruhigungsrolle kpl. Z-Schraube IS M3x8 Sicherungsscheibe D3,2/5,5		
7 7.1		1.050.351.00 1.050.351.04	Umlenkrolle kpl. Mutter		
8.1 8.2 8.3 8.4 8.5 8.6		1.050.350.00 21.51.8355 24.16.1030 23.01.1032 1.050.340.03 21.53.0353 24.16.1030	Abschirmklappe kpl. Lin Schraube IS M3x8 Scherungsscheibe D3,2x5,5 U-Scheibe D3,2x6/0,5 Blattfeder Z-Schraube IS M3x5 Sicherungsscheibe D3,2x5,5		
9		1.020.859.00	Bandführungsbolzen kpl.		
10.1 10.2 10.3		22.01.8030 37.01.0101 1.020.710.05	Mutter M3x0,8 Tellerfeder D3,2x8x0,3 Azimuteinstellschraube		
11.1		1.020.500.01	Distanzscheibe D4,2/15,5x0,1		
12 12.1 12.2		21.53.0456 24.16.1040	Variabel siehe unter 19 Schraube Sicherungsscheibe		
13 13.1 13.2		21.53.0455 24.16.1040	Variabel siehe unter 19 Schraube Sicherungsscheibe		
14			Variabel siehe unter 19		
155			Variabel siehe unter 19		
16.1		21.53.0464	Schraube M4x30		
17.1 17.2 17.3 17.4 17.5		54.13.1003 21.51.8355 24.16.1030 29.26.1022 1.050.340.07 24.16.1020 21.01.0204	Stecker D-Type 25pol Lin Schraube IS M5x8 Sicherungsscheibe D3,2x5,5 Lötöse D3,2x5,5x10,5 Distanzbolzen Sicherungsscheibe D2,2x4 Z-Schraube M2x6		
18			Siehe Foto		

#### HEAD BLOCK

HEAD BLOCK				
POS	GTY	ORDER NUMBER	PART NAME SPECIFICATION	
1 1.1 1.2 1.3 1.4		1.727.125.00 1.010.036.21 1.727.125.04 1.010.025.37 21.53.0354 24.16.1030	Head cover compl. S-Screw special Cover cap for scissors Tension spring shape B4x17 Z-Screw IS M3x6 Lock washer D3,2x5.5	
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 2.10		1,727,126,00 1,010,011,21 1,179,143,03 1,727,126,02 1,727,126,03 20,23,7280 1,727,127,01 21,53,0353 24,16,1030 1,810,186,02 1,810,400,05	Head block cover compl. Lin Screw [S special Rubber bumper for head cover Cover plate for 2nd reprohead Socket Screw KS D2.5 Screw socket I-Screw [S M3x5 Lock washer D3.2x5.5 Stopper Spring	
3 3.1		1.810.402.81 1.337.958.05	Marker compl.(OPTION) Rubber insert with ink	
4 4.1 4.2		1.020.889.81 1.020.861.07 1.020.715.12	Tape scissors compl.(OPTION) Scissor blade fixed Scissor blade movable	
5 5.1 5.2 5.3		1.050.314.00 21.53.0354 24.16.1030 23.01.1032	Light barrier compl. Z-Screw IS M3x6 Lock washer D3.2/5.5 Washer D3.2x6	
6.1 6.2		1.050.311.00 21.53.0355 24.16.1030	Damping pulley compl. Z-Screw IS M3x8 Lock washer D3.2/5.5	
7 7.1		1.050.351.00 1.050.351.04	Tape guide roller compl. Nut	
8.1 8.2 8.3 8.4 8.5		1.050.350.00 21.51.8355 24.16.1030 23.01.1032 1.050.340.03 21.53.0353 24.16.1030	Headshield compl. Lin Screw IS M3x8 Lock washer D3.2x5.5 Washer D3.2x6/0.5 Plate spring T-Screw IS M3x5 Lock washer D3.2x5.5	
9		1.020.859.00	Tape guide pin compl.	
10.1 10.2 10.3		22.01.8030 37.01.0101 1.020.710.05	Nut M3xD.8 Spring washer D3.2x8.0.3 Head adjustment screw	
11.1		1.020.500.01	Sleeve spacer	
12 12.1 12.2		21.53.0456 24.16.1040	Variable see 19 Screw Lock washer	
13.1 13.2	4	21.53.0455 24.16.1040	Variable see 19 Screw Lock washer	
14			Variable see 19	
15			Variable see 19	
16.1		21.53.0464	Screw M4×30	
17.1 17.1 17.2 17.3 17.4 17.5		54.13.1003 21.51.8355 24.16.1030 29.26.1022 1.050.340.07 24.16.1020 21.01.0204	Connector D-Type 25pin Lin Screw IB M3x8 Lock washer D3.2x5.5 Soldering tab D3.2x5.5x10.5 Bold Lock washer D2.2x4 Z-Screw M2x6	
18			See picture	

### KOPFTRAEGER VOLLSPUR (MONO)

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 12 13 14			Kopfträger Vollspur kpl. Löschkopf Vollspur Aufnahmekopf Vollspur Wiedergabekopf Vollspur

annoncommunica de la composición dela composición de la composición dela composición de la composición de la composición de la composición dela composición dela composición de la composición dela composición de la composición dela composición dela composición dela composición dela composición dela composición dela co	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
Participation of the Participa	19 12 13 14		1.116.097.81 1.318:710.00	Kopfträger Vollspur kpl. Löschkopf Vollspur Aufnahmekopf Vollspur Wiedergabekopf Vollspur

Continuentalisations	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
Designation	19		1.050.381.00	Kopfträger Vollspur nur Wiedergabe kpl.
Antonio Contract	12			Löschkopfattrappe
9	13			Aufnahmekopfattrappe
and Manager	14		1.318.616.00	Wiedergabekopf Vollspur

## KOPFTRAEGER 2-SPUR 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 12 13 14		1.116.092.81 1.317.720.00	Kopfträger 2-Spur 2mm kpl. Löschkopf 2-Spur überlappend Aufnahmekopf 2-Spur 2mm Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19 12 13 14		1.116.092.81 1.318.720.00	Kopfträger 2-Spur 2mm kpl. Löschkopf 2-Spur überlappend Aufnahmekopf 2-Spur 2mm Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.343.81	Kopfträger 2-Spur 2mm mit zusätzlichem %Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13	000	1.317.720.00	Aufnahmekopf 2-Spur 2mm
14		1.317.626.00	Wiedergabekopf 2-Spur 2mm
15		1.318.629.81	Wiedergabekopf %Spur 2CH

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.393.81	Kopfträger 2-Spur mit zusätzlichem %Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.318.720.00	Aufnahmekopf 2-Spur 2mm
14		1.318.626.00	Wiedergabekopf 2-Spur 2mm
15		1.318.629.81	Wiedergabekopf %Spur 2CH

### HEAD BLOCK FULL-TRACK (MONO)

F	os	QTY	ORDER NUMBER	PART NAME SPECIFICATION
	19 12 13 14		1.116.097.81 1.317.710.00	Head block full track compl. Erase head full track Record head full track Reproduce head full track

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13 14		1.116.097.81 1.318.710.00	Head block full track compl. Erase head full track Record head full track Reproduce head full track

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.381.00	Head block full track
			repro-only compl.
12		1.116.089.01	Dummy erase head
13		1.216.010.01	Dummy record head
14		1.318.616.00	Reproduce head full track

## HEAD BLOCK 2-TRACK 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13 14		1.116.092.81 1.317.720.00	Head block 2-track 2mm compl. Erase head 2-track overlapp. Record head 2-track 2mm Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19 12 13 14		1.116.092.81 1.318.720.00	Head block 2-track 2mm compl. Erase head 2-track overlapp. Record head 2-track 2mm Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.343.81	Head block 2-track 2mm with additional %track 2CH reproduce head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.317.720.00	Record head 2-track 2mm
14		1.317.626.00	Reproduce head 2-track 2mm
15		1.318.629.81	Reproduce head %track 2CH

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.393.81	Head block 2-track with additional %track 2CH reproduce head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.318.720.00	Record head 2-track 2mm
14		1.318.626.00	Reproduce head 2-track 2mm
15		1.318.629.81	Reproduce head %track 2CH

	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	19		1.050.345.00	Kopfträger 2-Spur 2mm mit Vollspur Löschkopf kpl.
-	12		1.116.097.81	Löschkopf Vollspur
	13		1.317.720.00	Aufnahmekopf 2-Spur 2mm
	14		1.317.626.00	Wiedergabekopf 2-Spur 2mm

-	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	19		1.050.395.00	Kopfträger 2-Spur 2mm mit Vollspur Löschkopf kpl.
	12		1.116.097.81	Löschkopf Vollspur
	13		1.318.720.00	Aufnahmekopf 2-Spur 2mm
	14		1.318.626.00	Wiedergabekopf 2-Spur 2mm
	1			

	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	19		1.050.347.00	Kopfträger 2-Spur 2mm, Lösch- kopf 0,8mm Trennspur kpl.
-	12		1.116.814.00	Löschkopf mit O,8mm Trennspur
	13			Aufnahmekopf 2-Spur 2mm
	14		1.317.626.00	Wiedergabekopf 2-Spur 2mm

	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	19			Kopfträger 2-Spur 2mm, Lösch- kopf O,8mm Trennspur kpl.
	12		1.116.814.00	Löschkopf mit O,8mm Trennspur
	13			Aufnahmekopf 2-Spur 2mm
-	14		1.318.626.00	Wiedergabekopf 2-Spur 2mm
- 1				

	POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	19		1.050.348.00	Kopfträger 2-Spur 2mm nur Wiedergabe kpl.
	12		1.116.089.01	Löschkopfattrappe
1	13		1.216.010.01	Aufnahmekopfattrappe
	14		1.317.626.00	Wiedergabekopf 2-Spur 2mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.398.00	Kopfträger 2-Spur 2mm nur Wiedergabe kpl.
12		1.116.089.01	Löschkopfattrappe
13		1.216.010.01	Aufnahmekopfattrappe
14		1.318.626.00	Wiedergabekopf 2-Spur 2mm

# KOPFTRAEGER STEREO 0,75mm

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.342.00	Kopfträger 0,75 mit 2-Spur
12		1.116.092.81	Löschkopf überlappend kpl. Löschkopf 2-Spur überlappend
13			Aufnahmekopf 0,75
14		1.317.636.00	Wiedergabekopf 0,75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19			Kopfträger 0,75 mit 2-Spur Löschkopf überlappend kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.318.730.00	Aufnahmekopf 0,75
14		1.318.636.00	Wiedergabekopf 0,75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.345.00	Head block 2-track 2mm with full track erase head compl.
12		1.116.097.81	Erase head full track
13		1.317.720.00	Record head 2-track 2mm
14		1.317.626.00	Reproduce head 2-track 2mm

P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.395.00	Head block 2-track 2mm with full track erase head compl.
12		1.116.097.81	Erase head full track
13		1.318.720.00	Record head 2-track 2mm
14		1.318.626.00	Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.347.00	Head block 2-track 2mm, erase head 0.8mm sep. track compl.
12			Erase head, O.8mm sep.track
13			Record head 2-track 2mm
14		1.317.626.00	Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19			Head block 2-track 2mm, erase head, O.8mm sep.track compl.
12			Erase head, O.8mm sep. track
13			Record head 2-track 2mm
14	and the second	1.318.626.00	Reproduce head 2-track 2mm

POS Q	TY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.348.00	Head block 2-track 2mm
12		1.116.089.01	repro-only compl. Dummy erase head
13		1.216.010.01	Dummy record head
14		1.317.626.00	Reproduce head 2-track 2mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.398.00	Head block 2-track 2mm repro-only compl.
12		1.116.089.01	Dummy erase head
13		1.216.010.01	Dummy record head
14		1.318.626.00	Reproduce head 2-track 2mm

# HEAD BLOCK STEREO 0,75mm

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.342.00	Head block 0.75 with 2-track overlapping erase head compl.
12 13 14			Erase head 2-track overlapp.
13		1.317.730.00	Record head 0.75
14		1.317.636.00	Reproduce head 0.75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19			Head block 0.75 with 2-track overlapping erase head compl.
12		i e	Erase head 2-track overlapp.
13		1.318.730.00	Record head 0.75
14		1.318.636.00	Reproduce head 0.75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.344.00	Kopfträger 0,75 mit Vollspur Löschkopf kpl.
12		1.116.097.81	Löschkopf Vollspur
13		1.317.730.00	Aufnahmekopf 0,75
14		1.317.636.00	Wiedergabekopf 0,75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.394.00	Kopfträger 0,75 mit Vollspur Löschkopf kpl.
12		1.116.097.81	Löschkopf Vollspur
13		1.318.730.00	Aufnahmekopf 0,75
14		1.318.636.00	Wiedergabekopf 0,75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19			Kopfträger 0,75 mit zusätzl. KSpur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.317.730.00	Aufnahmekopf 0,75
14			Wiedergabekopf 0,75
15		1.318.629.81	Wiedergabekopf ¼Spur 2CH

POS	GTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.396.81	Kopfträger 0,75 mit zusätzl. %Spur 2CH Wiedergabekopf kpl.
12		1.116.092.81	Löschkopf 2-Spur überlappend
13		1.318.730.00	Aufnahmekopf 0,75
14		1.318.636.00	Wiedergabekopf 0,75
15		1.318.629.81	Wiedergabekopf ¼Spur 2CH

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19		1.050.349.00	Kopfträger 0,75 nur Wiedergabe kpl.
12		1.116.089.01	Löschkopfattrappe
13		1.216.010.01	Aufnahmekopfattrappe
14		1.317.636.00	Wiedergabekopf 0,75

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
19			Kopfträger 0,75 nur Wiedergabe kpl.
12			Löschkopfattrappe
13			Aufnahmekopfattrappe
14		1.318.636.00	Wiedergabekopf 0,75

### KOPFTRAEGER 1/4 SPUR 2 SPUR \*

-	P08	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	19 * 12 13 14		1.116.099.81 1.318.724.00	Kopfträger %Spur 2CH kpl. Löschkopf %Spur 2CH Aufnahmekopf %Spur 2CH Wiedergabekopf %Spur 2CH

<sup>\*</sup> WIRD NICHT MEHR PRODUZIERT, NUR NOCH ERSATZKOEPFE ERHAELTLICH

P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.344.00	Head block 0.75 with full track erase head compl.
12 13 14		1.317.730.00	Erase head full track Record head 0.75 Reproduce head 0.75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.394.00	Head block 0.75 with full track erase head compl.
12		1.116.097.81	Erase head full track
13		1.318.730.00	Record head 0.75
14		1.318.636.00	Reproduce head 0.75

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.346.81	Head block 0.75 with add. %track 2CH repro-head compl.
12 13 14 15		1.317.730.00 1.317.636.00	Erase head 2-track overlapp. Record head 0.75 Reproduce head 0.75 Reproduce head %track 2CH

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19			Head block 0.75 with add. %track 2CH repro-head compl.
12		1.116.092.81	Erase head 2-track overlapp.
13		1.318.730.00	Record head 0.75
14		1.318.636.00	Reproduce head 0.75
15		1.318.629.81	Reproduce head %track 2CH

POS	GTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.349.00	Head block 0.75 repro-only compl.
12 13 14			Dummy erase head Dummy record head
14		1.317.636.00	Reproduce head 0.75

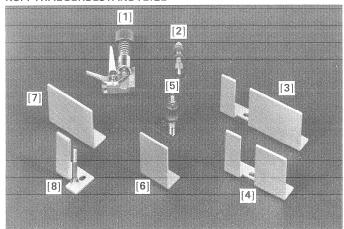
P08	QTY	ORDER NUMBER	PART NAME SPECIFICATION
19		1.050.399.00	Head block 0.75
12		1.116.089.01	Dummy erase head
13			Dummy record head
14		1.318.636.00	Reproduce head 0.75

# HEAD BLOCK 1/4 TRACK 2 TRACK \*

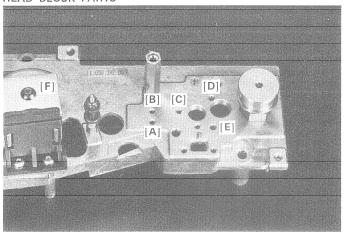
POS	GTY	ORDER NUMBER	PART NAME SPECIFICATION
19 * 12 13 14		1.116.099.81 1.318.724.00	Head block %track 2CH compl. Erase head %track 2CH Record head %track 2CH Reproduce head %track 2CH

\* NO LONGER PRODUCED, JUST REPLACEMENT HEADS AVAILABLE

#### KOPFTRAEGERBESTANDTEILE



#### HEAD BLOCK PARTS



	1.020.8		Bandschere kpl. (Befest. mit Pass-Sitz in <b>POS D</b> und mit der Schraube in <b>POS E</b> ).
	für Kopfträg 200 (POS A v		07 mit Seriennummern :
[2] =	1.020.8	59.00	Bandführungsbolzen kpl. (Befestigung in <b>POS A</b> )
[3] =	1.050.3		Abschlusswinkel 56mm Version ohne Bandschere (Befest. in <b>POS</b> B und C)
[4] =	: 1.050.3		Abschlusswinkel 41mm Version mit Bandschere (Befest. in POS B und C)
8	für Kopfträg 2200 (Loch P		77 mit Seriennummern :) :

[5] =	1.050.352.00	Bandführungsbolzen
		(ohne Führungselemente)
		(Befestigung in <b>POS</b> B)
[6] =	1.050.340.06	Abschlusswinkel 20mm
		Version mit Bandschere
		(Befestigung in POS C)
[7] =	1.050.340.05	Abschlusswinkel 36mm
		Version ohne Bandschere
		(Befestigung in POS C)

Umbau: Verlängerte Abschlusswinkel für Kopfträger von A807 mit Seriennummern unter 2200 :

[8] =	1.050.353.00	Bandführungsbolzen (ohne
		Führungselemente)(Befest.
		in POS B) auch in Kopftr.
		mit 2.Reprokopf vorhanden
		- Führungselemente von
		Bandführung [5] verwender
		- Abschlusswinkel [6] oder
		[7] bleiben eingebaut

[1]	noute some	1.020.889.81	Tape scissors complete
			(Fastening with dowel pin
			in POS D and mounting
			screw in POS E).

HEADBLOCKPARTS of A807 with Serialnumbers above 2200 (POS A existing) :

[2]	None Miles	1.020.859.00	Tape guide pin complete (Fastening in <b>POS A</b> )
[3]	nedde Melde	1.050.390.01	Angle braket 56mm, version without tape scissors
[4]	Same Same	1.050.390.02	(Fastening in POS B and C) Angle braket 41mm, version with tape scissors (Fastening in POS B and C)

<code>HEADBLOCKPARTS</code> of A807 with <code>Serialnumbers</code> below 2200 (hole POS A not existing) :

[5]	1000 1000	1.050.352.00	Tape guide pin (without
			tape guide elements)
			(Fastening in POS B)
[6]	name agents	1.050.340.06	Angle braket 20mm, version
			with tape scissors
			(Fastening in POS C)
[7]	1000	1.050.340.05	Angle braket 36mm, version
			without tape scissors
			(Fastening in POS C)

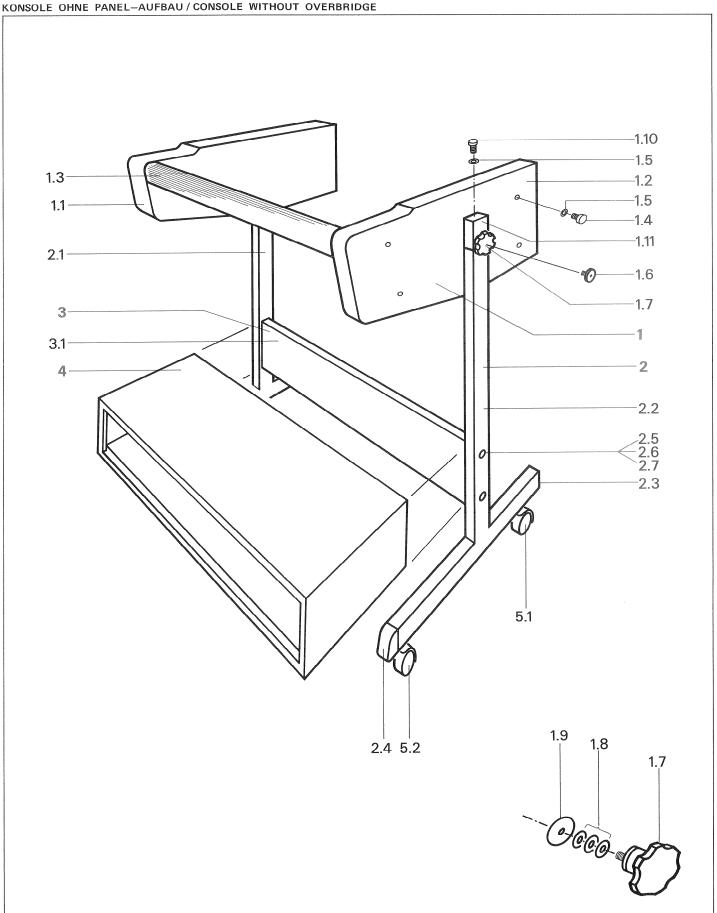
CONVERSION for extended angle braket for A807 headblock with Serialnumbers below 2200 :

[8]	town town	1.050.353.00	Tape guide pin (without
			tape guide elements)
			(Fastening in POS B)
			- Use tape guide elements
			of tape guide pin [5].
			- Remain angle braket
			<pre>[6] or [7] built - in.</pre>

[F]	===	1.050.340.04	μ - Metall Anschlag
1			siehe Žeichnung 8.9
			Index 14/15

[F]	****	1.050.340.04	μ – metal stopper
			see drawing 8.9
			Index 14/15

8.10 KONSOLE OHNE PANEL-AUFBAU / CONSOLE WITHOUT OVERBRIDGE



### KONSOLE OHNE PANEL-AUFBAU

QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
	20.020.205.25 20.020.205.35	Konsole kompl. mit Traver- se ohne Panelaufbau Konsole kompl. mit 19" Rack- unterbau ohne Panelaufbau
	1.058.055.00 1.058.055.01 1.058.055.02 1.058.071.00 21.53.0456 24.16.1040 1.010.037.21	Konsolenset ohne Panelaufbau Holzseitenwand links Holzseitenwand rechts Handauflage Befestigungsschraube Z IS M4x10 Rippenscheibe D 4,3/7 IS-Schraube M5x30
	24.16.1050 1.058.053.05 1.058.053.06 37.01.0128 1.058.053.06 1.010.052.21 1.058.068.00	Rippenscheibe D 5,3/9 Spez. Schraube M10 Handrad spez M10 Tellerfeder Anlaufscheibe Z-Schraube IS M5x50 Lagerbock kompl.
	1.058.050.00 1.058.060.00 1.058.061.00 1.038.880.01 1.058.001.05 31.03.0106 21.53.0571 26.16.1060	Beinset Bein links H=780/840 Bein rechts H=780/840 Abschlusspfropfen Rohrabschluss Abdeckkappe Z-Schraube IS M6x14 Rippenscheibe D 6,4/10
	1.058.101.00 1.058.112.00	Traversenset kompl. Traverse
	1.058.057.00	19" Rackunterbau
	33.04.0270 33.04.0271	Rolle schwenkbar ohne Bremse Rolle schwenkbar mit Bremse
		20.020.205.35  1.058.055.00 1.058.055.01 1.058.055.02 1.058.071.00 21.53.0456  24.16.1040 1.010.037.21 24.16.1050 1.058.053.06 37.01.0128 1.058.053.06 1.010.052.21 1.058.068.00  1.058.060.00 1.058.061.00 1.058.061.00 1.058.061.00 1.058.061.00 1.058.010.05 31.03.0106 21.53.0571 26.16.1060  1.058.057.00 33.04.0270

### CONSOLE WITHOUT OVERBRIDGE

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
quel.		20.020.205.25 20.020.205.35	Console with traverse for machines without overbridge Console with pedestal rack 19" for machines without overbridge
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9		1.058.055.00  1.058.055.01 1.058.055.02 1.058.071.00 21.53.0456 24.16.1040 1.010.037.21 24.16.1050 1.058.053.05 1.058.053.06 37.01.0128 1.058.053.06 1.010.052.21 1.058.068.00	Console—set without overbridge Side panel left Side panel right Leather hand rest Fixing screw Z IS M4xi0 Lock washer D 4.3/7 Screw IS M5x30 Lock washer D 5.3/9 Special screw M10 Handwheel M10 Spring washer Thrust—ring Z—Screw IS M5x50 Bearing braket
2 2.1 2.2 2.3 2.4 2.5 2.6 2.7		1.058.050.00 1.058.060.00 1.058.061.00 1.038.880.01 1.058.001.05 31.03.0106 21.53.0571 26.16.1060	Set of legs Leg left H=780/840 Leg right H=780/840 Cover cap straight Plastic plug Plastic cover Z-Screw IS M6x14 Lock washer D 6,4/10
3 3.1		1.058.101.00 1.058.112.00	Traverse compl. Traverse
4		1.058.057.00	Pedestal rack 19"
5.1 5.2		33.04.0270 33.04.0271	Castor black without brake Castor black with brake

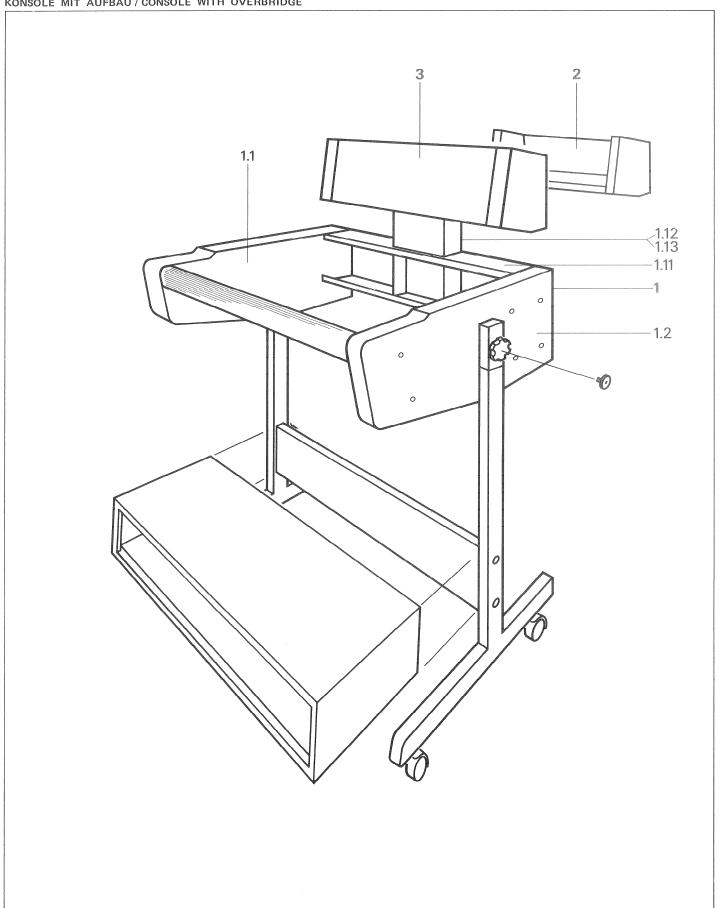
## BLINDABDECKPLATTE FUER 19" RACKUNTERBAU

	FAR	BE
	grau	eloxal
1 Einheit hoch 2 Einheiten hoch 3 Einheiten hoch	1.918.011.00 1.918.012.00 1.918.013.00	1.918.001.00 1.918.002.00 1.918.003.00
Schrauben für 19" Ra M6x12	ckeinschub	21.99.0164
Schrauben für 19" Ra M6x16	ckeinschub	21.99.0167
Unterlagsscheibe für M6 für 19" Rackeinsc		23.99.0121

### FILLER PANELS FOR 19" PEDESTAL RACK

	FIN	ISH
	gray paint	anodized
1 unit width 2 units width 3 units width	1.918.011.00 1.918.012.00 1.918.013.00	1.918.001.00 1.918.002.00 1.918.003.00
Screw for 19" rack m	ounting	21.99.0164
Screw for 19" rack m M6x16	ounting	21.99.0167
Washer for 19" rack M6	mounting	23.99.0121

8.10.1 KONSOLE MIT AUFBAU/CONSOLE WITH OVERBRIDGE



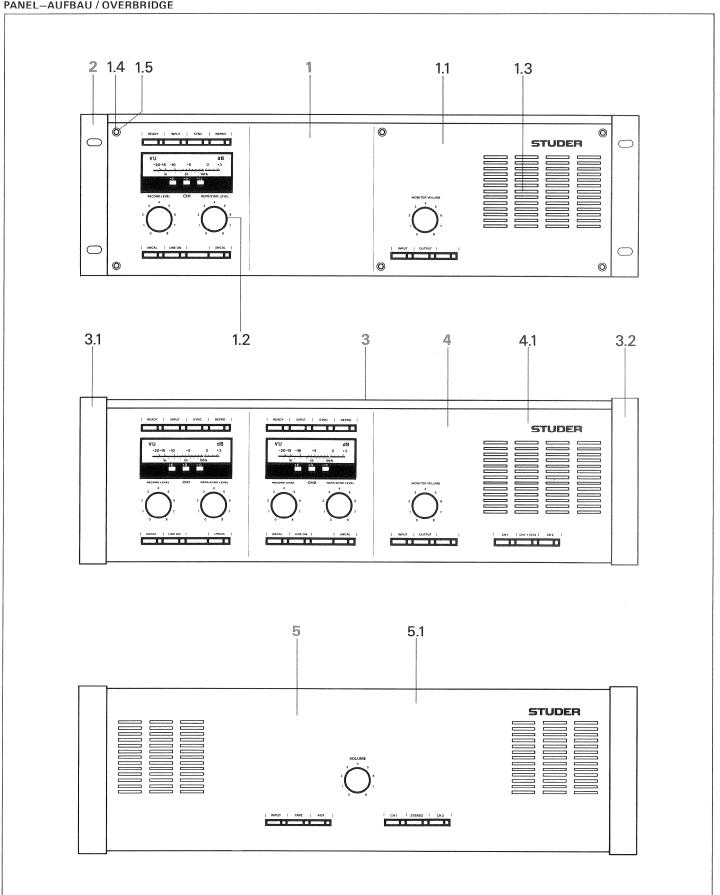
### KONSOLE MIT PANELAUFBAU

			ML 500 W 500 W 500 W 500 W 40
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
T-Spanner (		20.020.205.05	Konsole mit Panelaufbau und Traverse Konsole mit Panelaufbau und 19" Rackunterbau
1.1 1.2 1.12 1.13 1.13		1.058.054.00 1.058.056.01 1.058.056.02 1.058.072.00 1.058.100.17 1.010.034.21	Konsolenset mit Panelaufbau Holzseitenwand links Holzseitenwand rechts Konsolenrückwand mit Hals Deckblech Hals Schrauben für Deckblech Hals IS M4 x 8
2		21.811.560.00	Tablar - Aufbau
3			Panelaufbau Versionen siehe Paragraph 8.11

## CONSOLE WITH OVERBRIDGE

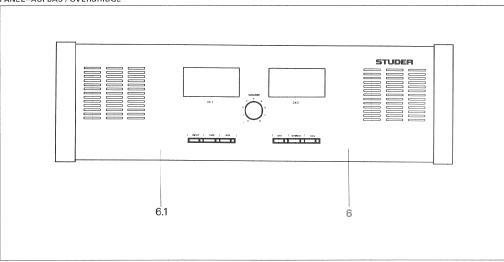
POS	aty	ORDER NUMBER	PART NAME SPECIFICATION
Şurb.		20.020.205.05	Console with overbridge and traverse Console with overbridge and 19" pedestal rack
1 1.1 1.2 1.12 1.13		1.058.054.00 1.058.054.01 1.058.056.02 1.058.072.00 1.058.100.17 1.010.034.21	Console-set with overbridge Lumber side panel left Lumber side panel right Console back panel with neck Plate cover neck Screw for plate cover neck IS M4 x 8
2		21.811.560.00	Shelf
3			Overbridge - Versions see paragraph 8.11

8.11 PANEL—AUFBAU / OVERBRIDGE



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POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1 1.1 1.2 1.3 1.4		1.727.930.81 1.727.951.81 1.727.930.01 1.727.100.43 71.01.0159 1.010.025.21 1.010.001.24	Ext. Panel Mono kpl. mit Holzseitenwänden Ext. Panel Mono kpl. mit 19" Rack-Winkeln Ext. Frontpanel Abd. Mono Drehknopf Lautsprecher Schraube M3x6 Spannscheibe M3
2		1.727.952.00	19" Rackbox kompl.
3 3.1 3.2		1.811.550.00 1.820.550.03 1.820.550.04	Panelaufbau mit Holzseiten- wänden Holzseitenwand links Holzseitenwand rechts
4.1		1.727.920.81 1.727.950.81 1.727.920.01	Ext. Panel stereo kpl. mit Holzseitenwänden Ext. Panel stereo kpl. mit 19" Rack-Winkeln Ext. Frontpanel Abd. 2VU
5 5.1		1.727.900.00 1.727.900.01	Ext. Monitor Panel stereo kpl. mit Holzseitenwänden Ext. Monitor Frontpanel Abdeckung
6 6.1		1.727.960.00 1.727.960.01	Ext. Stereo-VU monitor Panel kpl. mit Holzseitenwänden Ext. Stereo-VU monitor Panel Abdeckung

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION	
1.1 1.2 1.3 1.4		1.727.930.81 1.727.951.81 1.727.930.01 1.727.100.43 71.01.0159 1.010.025.21 1.010.001.24	Ext. panel mono compl. with wooden side panels Ext. monitor panel mono compl. with 19" rack rail set Ext. front panel cover mono Button Loudspeaker Screw M3x5 Washer M3	
2		1.727.952.00	19" rack box compl.	
3 3.1 3.2		1.811.550.00 1.820.550.03 1.820.550.04	Overbridge with wooden side panels Wooden side panel left Wooden side panel right	
4.1		1.727.920.81 1.727.950.81 1.727.920.01	Ext. panel stereo compl. with wooden side panels Ext. panel stereo compl. with 19" rack rail set Ext. front panel cover 2VU	
5 5.1		1.727.900.00 1.727.900.01	Ext. monitor panel stereo compl. with wooden side panel Ext. monitor front panel cover	
6 6.1		1.727.960.00 1.727.960.01	Ext. Stereo-VU monitor panel compl.with wooden side panels Ext. Stereo-VU monitor front cover plate	

8.12 SCHILDER / LABEL



1.727.364.01

ON

1.727.100.57

Tastenschild unbeschriftet

PHANTOM POWERING

(für PBO - Versionen)

Schild Phantom - Speisungsschalter Phantom powering switch designation

plate, self adhesive

Designation plate blank for PBO - versions

#### 1.727.100.50

Audio Anschlussaufkleber Audio connection designation plate, self adhesive



#### 1.727.100.49

Schild - Netzteil, Fernsteuer - Anschlüsse Power supply, remote control designation plate, self adhesive



#### 1.727.360.06

Schildersatz, Laufwerktasten Set of designations plates, tape transport keys



#### 1.727.091.03

Monitor Panel - Anschlussaufkleber Monitor panel designation plate, self adhesive

LOC2	LOC3	LOOP   LIFTER
LOOP	BACKSPACE	LOOP   LOC START
LOC START	BACKSPACE	HEAD A   HEAD B
LOC START	FADER RDY	TAPE A TAPE B
LOC2	LOCSTART	MONO MONO/T.GEN
LOOP	FADER RDY	

#### 1.727.100.58

Schildersatz programmierbare Tasten Set of designation plates, programmable keys

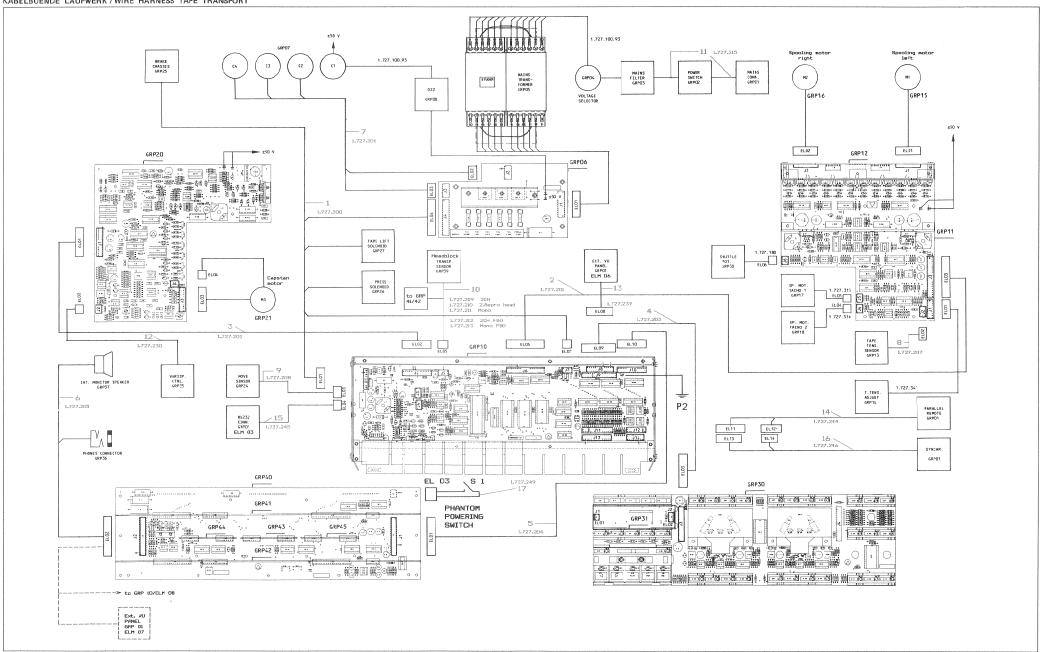


#### 1.727.013.01

VU - Meter Panel - Anschlussaufkleber VU - meter panel designation plate, self adhesive

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8.13 KABELBUENDE LAUFWERK/WIRE HARNESS TAPE TRANSPORT



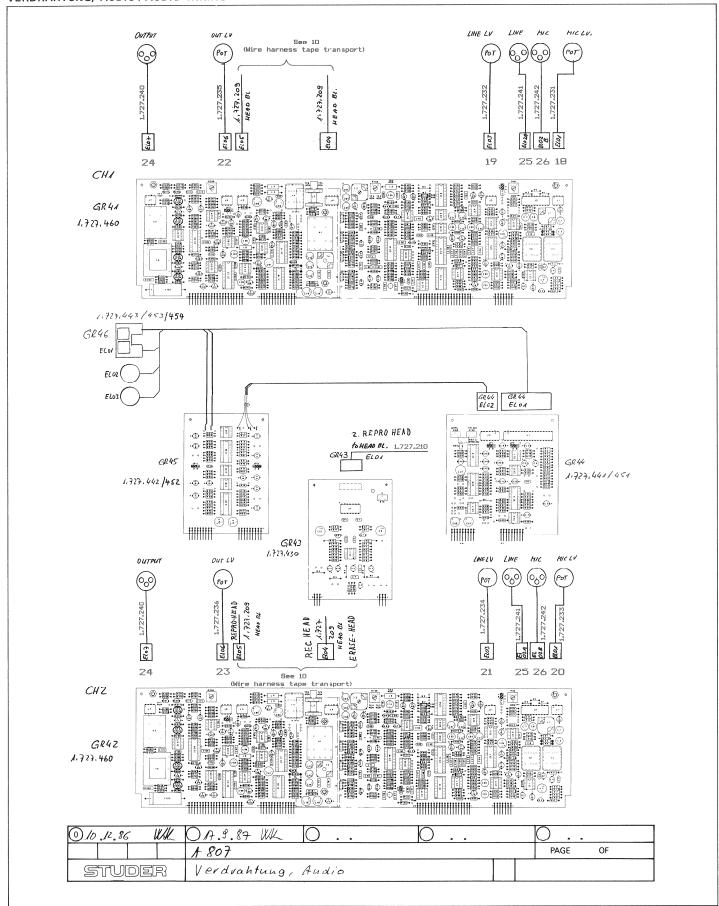
### KABELBUENDE LAUFWERK

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
1		1.727.200.00	Kabelbund Netzteil
2		1.727.201.00	Kabelbund Laufwerk - Wickelmotorsteuerung
3		1.727.202.00	Kabelbund Laufwerk - Capstanmotorsteuerung
4		1.727.203.00	Kabelbund Laufwerk - Commandpanel
5		1.727.204.00	Kabelbund Laufwerk - Audiocontrol-Print
6		1.727.205.00	Kabelbund int. Monitor - Audio control print oder anstelle von 1.727.205.:
		1.727.238.00	Kabelbund ext. VU-Panel Audioanschluss MONO
		1.727.247.00	Kabelbund ext. VU-Panel Audioanschluss 2CH
		1.727.248.00	Kabelbund ext. Monitoranschluss
7		1.727.206.00	Kabelbund Kondensatoren, Gleichrichter – Print
8		1.727.207.00	Kabelbund Bandzugsensor, Wickelmotorsteuerung
9		1.727.208.00	Kabelbund Bewegungs- sensor - Laufwerk
10		1.727.209.00 1.727.210.00	Kabelbund Kopfträger 2CH Kabelbund Kopfträger 2CH + zusätzlicher Reprokopf
Notice that a section		1.727.211.00	Kabelbund Kopfträger
		1.727.212.00	Kabelbund Kopfträger 2CH nur Wiedergabe
		1.727.213.00	Kabelbund Kopfträger MONO nur Wiedergabe
11		1.727.215.00	Kabelbund Netzeingang
12		1.727.230.00 1.727.230.01	Kabelbund Varispeed - Poti Potentiometer 50kΩ lin
13		1.727.239.00	Kabelbund ext. VU-Panel Control - Anschluss
14		1.727.244.00	Kabelbund paralleler Fernsteuer – Anschluss
15		1.727.245.00	Kabelbund serieller Fernsteuer – Anschluss
16		1.727.246.00	Kabelbund paralleler Synchronisator – Anschluss
17		1.727.249.00 55.12.0007	Kabelbund Phantomschalter Phantom Schalter S1

### WIRE HARNESS TAPE TRANSPORT

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
1		1.727.200.00	Wire harness supply
2		1.727.201.00	Wire harness tape transport – spooling motor control
3		1.727.202.00	Wire harness tape transport - capstan motor control
4		1.727.203.00	Wire harness tape transport – command panel
5		1.727.204.00	Wire harness tape transport – audio control
6		1.727.205.00	Wire harness int. Monitor - audio control PCB or in place of 1.727.205.:
		1.727.238.00	Wire harness ext. VU-Panel audio connector MONO
		1.727.247.00	Wire harness ext. VU-Panel audio connector 2CH
		1.727.248.00	Wire harness ext. Monitor connector
7		1.727.206.00	Wire harness capacitors - rectifier PCB
8		1.727.207.00	Wire harness tape tension sensor,spooling motor contr.
9		1.727.208.00	Wire harness move sensor – tape transport
10	op-vice-either browning feet	1.727.209.00 1.727.210.00	Wire harness headblock 2CH Wire harness headblock 2CH + add. reprohead
	Acceptance of the control of the con	1.727.211.00	Wire harness headblock MONO (1CH)
d-entitioned	over20 between 20 cm	1.727.212.00	Wire harness headblock 2CH playback only
a de la company	NAMES AND ADDRESS OF THE PARTY	1.727.213.00	Wire harness headblock MONO playback only
11		1.727.215.00	Wire harness mains input
12		1.727.230.00 1.727.230.01	Wire harness varispeed - pot. Potentiometer 50kΩ lin
13	No. of Contract of	1.727.239.00	Wire harness ext. VU-Panel control connector
14		1.727.244.00	Wire harness parallel remote control connector
15	Contraction of the Contraction o	1.727.245.00	Wire harness serial remote control connector
16		1.727.246.00	Wire harness parallel synchronizer connector
17		1.727.249.00 55.12.0007	Wire harness ph. pow. switch Phantom powering switch S1

8.14 VERDRAHTUNG, AUDIO / AUDIO WIRING DIAGRAM



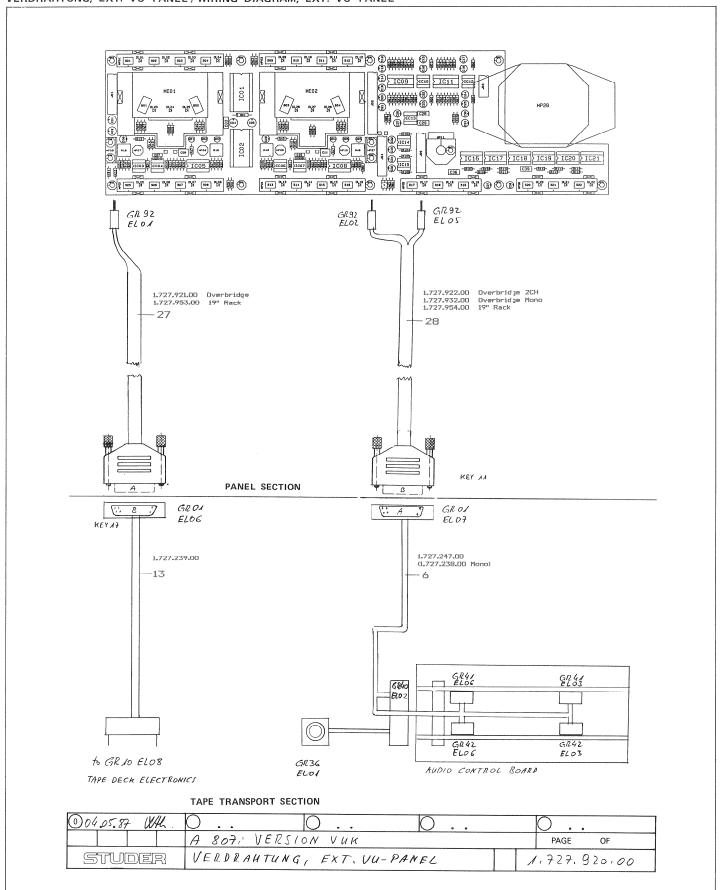
### VERDRAHTUNG, AUDIO

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION		
18		1.727.231.00	Kabelbund Mic. Pegel Pot. Meter CH1		
19		1.727.232.00	Kabelbund Linien-Pegel Pot. Meter CH1		
20		1.727.233.00	Kabelbund Mic. Pegel Pot. Meter CH2		
21		1.727.234.00	Kabelbund Linien-Pegel Pot. Meter CH2		
22		1.727.235.00	Kabelbund Ausgangspegel Pot. Meter CH1		
23		1.727.236.00	Kabelbund Ausgangspegel Pot. Meter CH2		
18 -	23	1.727.230.01	Pot. Meter 50kΩ lin		
24		1.727.240.00	XLR Ausgang kpl. (Stecker)		
25		1.727.241.00	XLR Linien-Eingang kpl. (Buchse)		
26		1.727.242.00	XLR MicEingang kpl.(Buchse)		

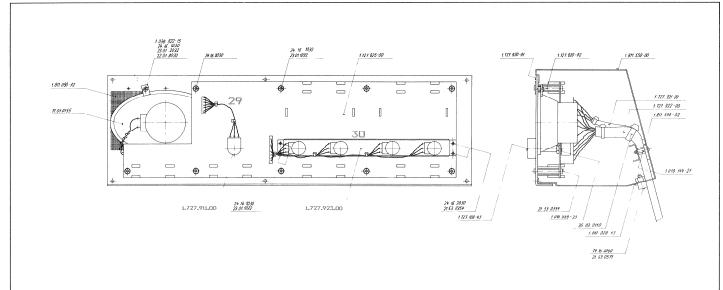
### AUDIO WIRING DIAGRAM

POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION		
18		1.727.231.00	Wire harness Mic. Level pot. meter CH1		
19		1.727.232.00	Wire harness Line Level pot. meter CH1		
20		1.727.233.00	Wire harness Mic. Level pot. meter CH2		
21		1.727.234.00	Wire harness Line Level pot. meter CH2		
22		1.727.235.00	Wire harness Output Level pot. meter CH1		
23		1.727.236.00	Wire harness Output Level pot. meter CH2		
18 -	23	1.727.230.01	Pot. meter 50kΩ lin		
24		1.727.240.00	XLR Output compl. (connector)		
25		1.727.241.00	XLR Line input compl. (jack)		
26		1.727.242.00	XLR Mic. input compl. (jack)		

8.15 VERDRAHTUNG, EXT. VU-PANEL/WIRING DIAGRAM, EXT. VU-PANEL



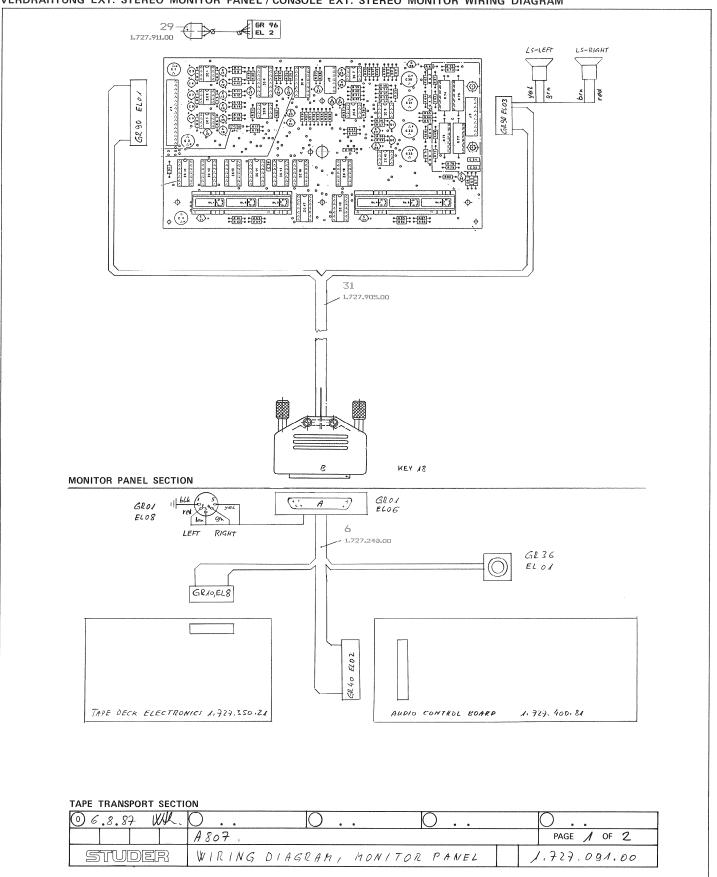
## VERDRAHTUNG, EXT. VU-PANEL/WIRING DIAGRAM, EXT. VU-PANEL



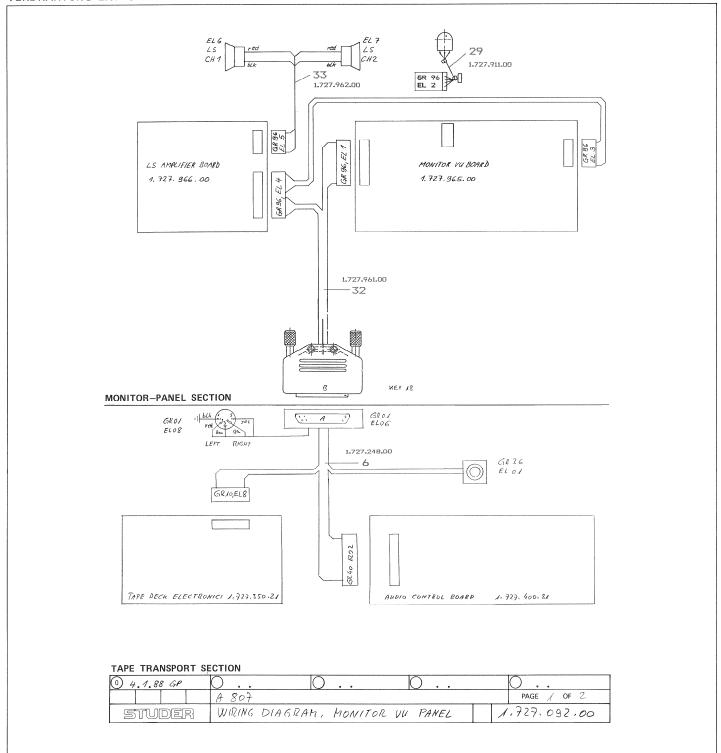
POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
27		1.727.921.00 1.727.953.00	Kabelbund VU-Meter Panel Control oder Kabelbund 19" Rack VU-Meter Panel,Control
28		1.727.922.00 1.727.932.00 1.727.954.00	Kabelbund VU-Meter Panel Audio 2CH oder Kabelbund VU-Meter Panel Audio Mono oder Kabelbund 19" Rack VU-Meter Panel Audio
29		1.727.911.00 1.727.911.01	Kabelbund ext. Monitor Pot. Meter Pot. Meter Monitor- lautstärke
30		1.727.923.00 1.727.231.01	Kabelbund ext. Potmetergruppe Pegel Pegel Pot. 5kΩ log

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
27		1.727.921.00 1.727.953.00	Wire harness VU-Meter panel control or Wire harness 19"rack moun- ting VU-Panel,control
28		1.727.922.00 1.727.932.00 1.727.954.00	Wire harness VU-Meter panel Audio 2CH or Wire harness VU-Meter panel Audio mono or Wire harness 19"rack VU-Meter panel Audio
29		1.727.911.00	Wire harness ext. monitor pot. meter Monitor volume control pot. meter
30		1.727.923.00 1.727.231.01	Wire harness ext. Level pot. meter unit Level pot. 5kΩ log

8.16
VERDRAHTUNG EXT. STEREO MONITOR PANEL/CONSOLE EXT. STEREO MONITOR WIRING DIAGRAM



### VERDRAHTUNG EXT. STEREO MONITOR VU PANEL / CONSOLE EXT. STEREO MONITOR VU PANEL WIRING DIAGRAM



POS	QTY	ORDERNUMMER	BEZEICHNUNG SPEZIFIKATION
31		1.727.905.00	Kabelbund Stereo-Monitor Panel
32		1.727.961.00	Kabelbund Stereo-Monitor Panel mit VU-Metern
33		1.727.962.00	Kabelbund Lautsprecher Stereo-Monitor VU-Panel

POS	QTY	ORDER NUMBER	PART NAME SPECIFICATION
31		1.727.905.00	Wire harness Stereo-monitor panel
32		1.727.961.00	Wire harness Stereo-monitor panel with VU-meters
33		1.727.962.00	Wire harness Loudspeaker Stereo-monitor VU-panel

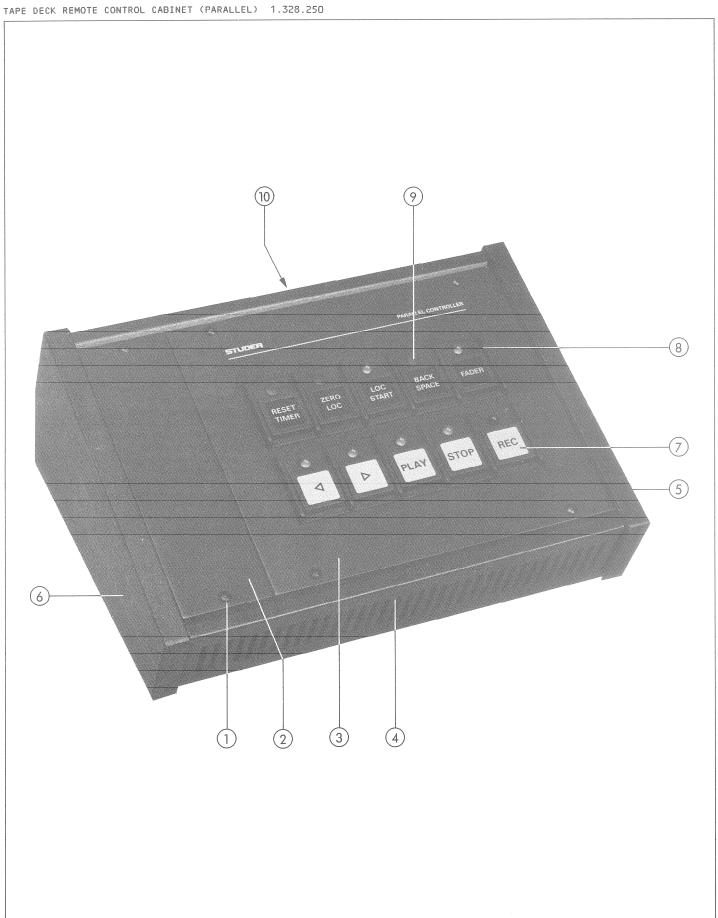
8.17 A807 VARIANTEN / A807 VERSIONS

A 8 0 7	VERSIONS	Headblock	Capstan Contr.	Command Panel	Audio Contr.	Audio Electr.PCB
Number	Part Name	1.050XX	1.727.***.XX	1.727XX	1.727XX	1.727XX
60.116.07011	A807-1	-390	.330	.360	.400	.461
60.116.07012	A807-1 VU	.390	.330	.361	.400	.460
<b>60.116.</b> 07013	A807-1 VUK	.390	.330	.360	.400	.462
60.116.07015	A807-1 VUK HS	.390	.335	.360	.401	.461
60.116.07016	A807-1 N.W.(PBO)	.381	.330	.360	.400	-465
60.116.07017	A807-1 VU N.W.(PBO)	.381	.330	.365	.400	-465
60.116.07021	A807-0.75	.394	.330	-360	.400	-461
60.116.07022	A807-0.75 VU	.392	.330	.362	.400	-460
60.116.07024	A807-0.75 VUK	.392	.330	.360	.400	.462
60.116.07025	A807-0.75 VUK HS	.392	.335	.360	.401	-467
60.116.07026	A807-0.75 N.W.(PBO)	.399	.330	.360	.400	.465
60.116.07027	A807-0.75 VU.N.W.(PBO)	.399	.330	.364	.400	.465
60.116.07030	A807-2 F	.395	.330	.360	.400	.461
60.116.07031	A807-2/2	.391	.330	-363	.400	.463
60.116.07032	A807-2/2 VU	.391	.330	.362	.400	.460
60.116.07033	A807-2	.397	.330	.360	.400	.461
60.116.07034	A807-2/2 VUK	.391	.330	.360	.400	.462
60.116.07036	A807-2/2 N.W.(PBO)	.398	.330	.360	.400	-465
50.116.07037	A807-2/2 VU.N.W.(PBO)	.398	.330	.364	.400	.465
50.116.07051	A807-2/4 VUK	.393	.330	.360	-400	.462
50.116.07052	A807-0.75/4 VUK	.396	.330	.360	.400	.462
50.116.07053	A807-2/4 VU	.393	.330	.362	.400	.460
50.116.07054	A807-0.75/4 VU	.396	.330	.362	.400	.460
50.116.07063	A807-0.75 VU/HS	.392	.335	.362	.401	.469
50.116.07064	A807-2/2 VU/HS	.391	.335	.362	.401	.469
50.116.07065	A807-2/2 VUK HS	.391	.335	.360	.401	.467
60.116.07066	AB07-2/2 VUK NRS	.391	.330	.360	.402	.462

# 9 SPARE PARTS/DIAGRAMS ACCESSORIES

## CONTENTS

TAPE DECK REMOTE CONTROL CABINET (PARALLEL) -TAPE DECK REMOTE CONTROL PCB LED PCB (2X)	1.328.250.00 1.328.251.00 .1.810.735.00	9/1 9/3 .9/3
TAPE DECK REMOTE CONTROL MODULE (PARALLEL) -PUSHBUTTON PCB -CONNECTOR PCB	1.328.256.00	9/7
REMOTE TIMER -CPU PCB -DISPLAY BOARD	1.328.275.00 1.328.276.20 .1.328.277.00	9/11 9/13 .9/15
VARISPEED CONVERSION KIT  (FOR PARALLEL REMOTE CONTROL ONLY)  VARISPEED CONTROL MODULE  -VARISPEED CONTROL PCB	1.328.290.00	9/19
VARISPEED CONTROL MODULE DE LUXE -DISPLAY AND KEYBOARD PCB -MAIN BOARD -CONNECTORS BOARD	1.328.281.00 1.328.282.20	9/23 9/25



A807

# TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250

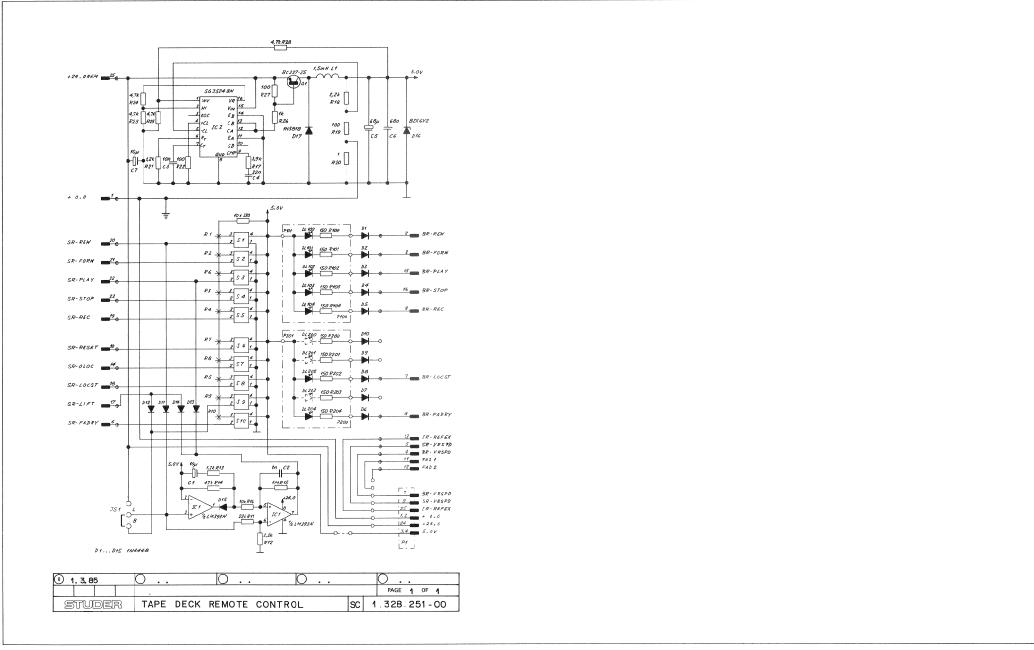
	ANZ	BESTELLNR.	BEZEICHNUNG	SPEZIFIKATION
	1	1.328.250.00	Laufwerk-Fernsteuerung (parallel) (Klebeschilder: Paragra	ph 8.12)
	1 4 4 4	1.328.250.08 1.010.025.21 24.16.1030	Laufwerk control Print Sechskantbolzen Linsenkopfschraube Sicherungsscheibe Unterlagsscheibe	M3x6
01	6	1.010.025.21	Linsenkopfschraube	M3x6
02	1	1.328.250.05	Blindabdeckung	
03	1	1.328.250.03	Frontblende	
04	1	1.820.921.00 31.02.0211	Gehäuse kompl. (mit Pos und Füssen) Fuss	5,6,10
05	1 4 4	21.53.0454	Holzseitenwand Z-Schraube IS Unterlagsscheibe	rechts M4x6
06	1 4 4	21.53.0454	Holzseitenwand Z-Schraube IS Unterlagsscheibe	links M4x6
07	10 10	1.011.210.01 1.010.202.37		
08	2		Drucktastengehäuse Dämpfungsstreifen	
09	3	1.810.300.21	Abdeckkappe	
10	1 1 1	35.03.0120 21.51.8454 24.16.1040	Kabelbefestigungssockel LIN-Schraube IS Sicherungsscheibe	- M4x6

		<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>	
	QTY	ORDER NUMBER	PART NAME SPECIFICATION
	1	1.328.250.00	Tape deck remote control cabinet (parallel) (self-adhesive labels:Paragraph8.12)
	1 4 4 4	1.328.250.08 1.010.025.21	TAPE DECK REMOTE CONTROL PCB Hex stud bolt Round head allen screw M3x6 Fin washer Washer
01	6	1.010.025.21	Round head allen screw M3x6
02	1	1.328.250.05	Dummy plate
03	1	1.328.250.03	Front cover
04	1	1.820.921.00 31.02.0211	and feet)
05	1 4 4		Side panel right Allen screw M4x6 Fin washer
06	1 4 4		Side panel left Allen screw M4x6 Fin washer
07	10 10	1.011.210.01 1.010.202.37	Push button Pressure spring
80	2		Push button housing Damping strip
09	3	1.810.300.21	Plastic cover
10	1 1 1	21.51.8454	Cable mounting support Round head allen screw M4x6 Fin washer

TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250.00

- TAPE DECK REMOTE CONTROL PCB 1.328.251.00

- LED PCB (2 x) 1.810.735.00

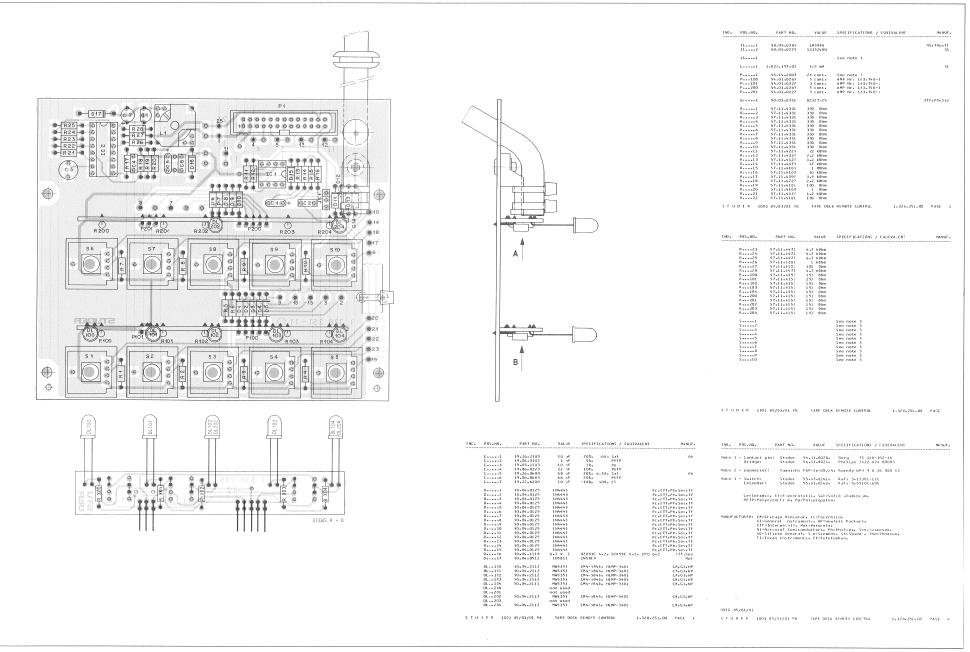


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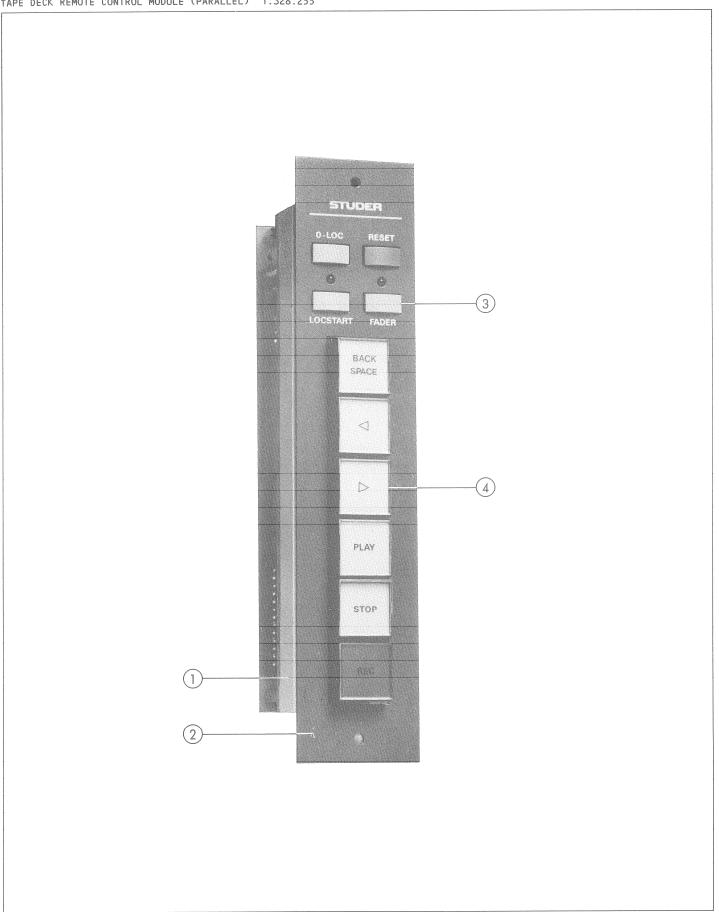
TAPE DECK REMOTE CONTROL CABINET (PARALLEL) 1.328.250.00

- TAPE DECK REMOTE CONTROL PCB 1.328.251.00





TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255

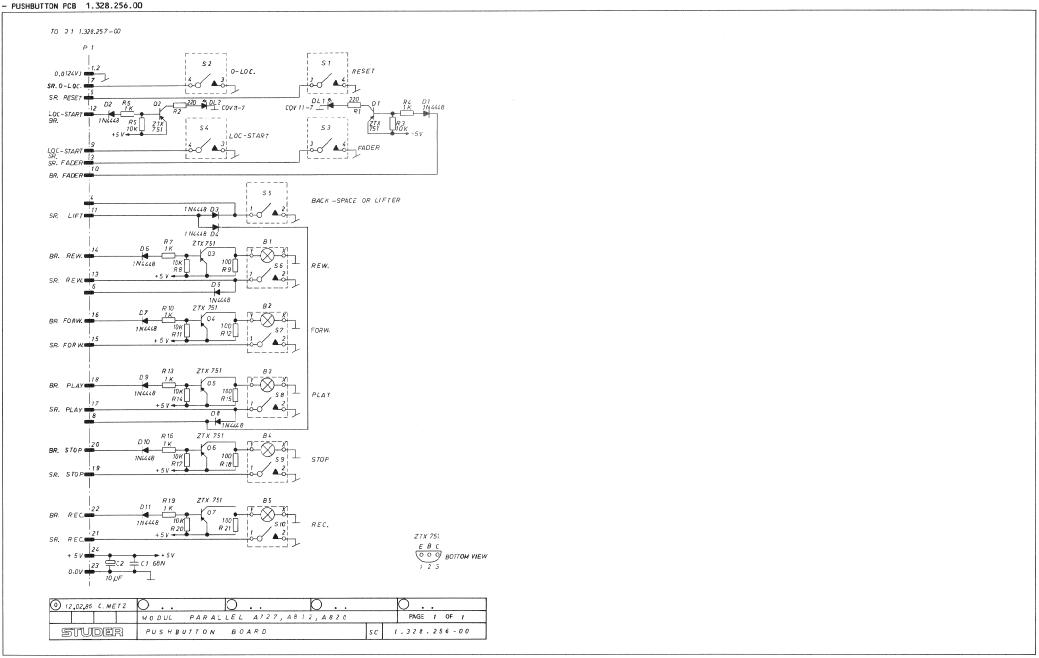


# TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255

	ANZ	BESTELLNR.	BEZEICHNUNG	SPEZIFIKATION
- COUNTY - C	1	1.328.255.00	Parallele Laufwerksteue (Schilder: Paragraph 8.	
AND THE PERSON OF THE PERSON O	1 1 4 4 4 4	1.328.257.00 1.010.110.27 21.53.0354 24.16.1030	Drucktasten Print Connector Print Sechskant-Gewinde-Bolze Z-Schraube IS Sicherungsring Unterlagsscheibe	n M3x6
01	1	1.328.255.01	Träger	
02	1	1.328.255.02	Frontplatte	
03	1	55.15.0122 55.15.0128		rot graŭ
04	1 5 1 5 6	55.15.0202 55.15.0212 55.15.0221		konkav flach rot weiss

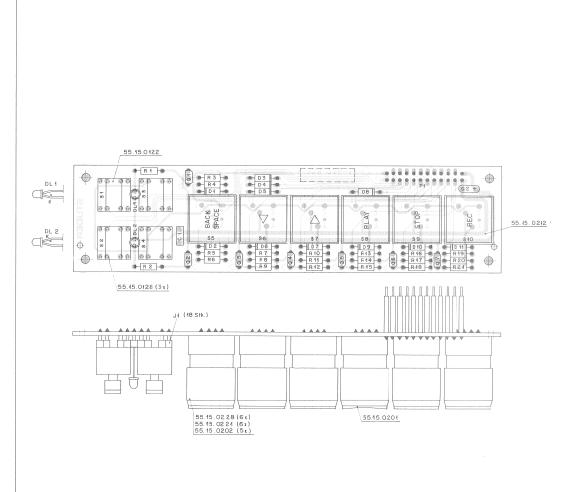
	QTY	ORDER NUMBER	PART NAME	SPECIFICATION
	1	1.328.255.00	Tape deck remote contro (parallel) (labels: Paragraph 8.12	
	1 1 4 4 4	1.328.257.00 1.010.110.27		МЗхб
01	1	1.328.255.01	Support	onder - common usu na lancia se no coloni ne di del considerazioni primatori en esta de servizione della ser
02	1	1.328.255.02	Front plate	dan dalah da
03	1 3		Push button knob Push button knob	red grey
04	1 5 1 5 6	55.15.0202 55.15.0212 55.15.0221	Push button cover Push button cover Diffusing screen Diffusing screen Push button frame	concave flat red white

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TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00 - PUSHBUTTON PCB 1.328.256.00



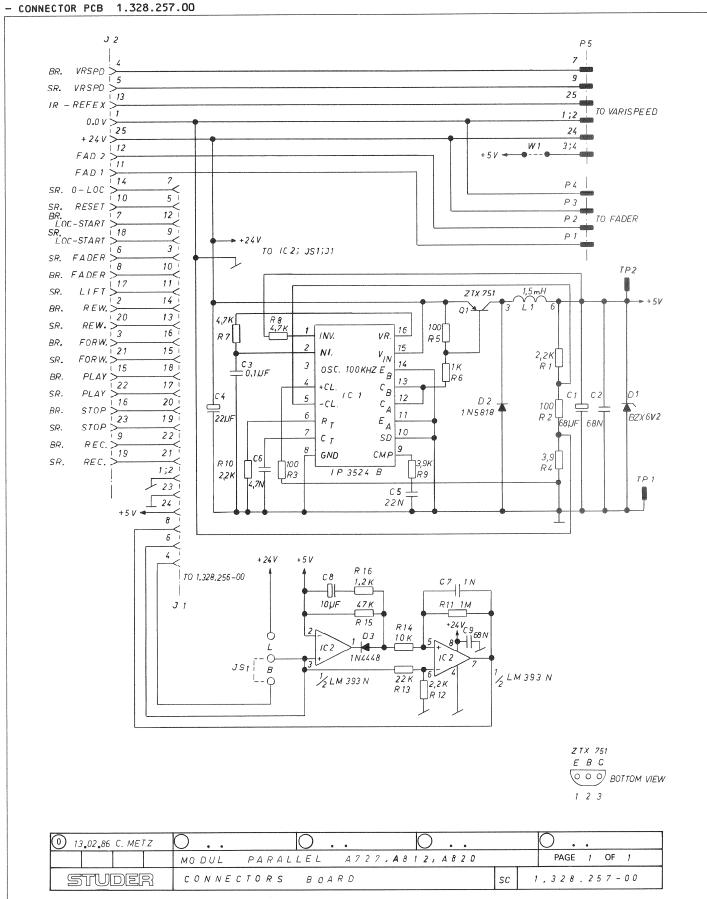
I ND.	POS+NO+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	B * * * * 1	51-02-0155		5 V: 0-060 A	
	B 2 B 3	51.02.0155		5 V: 0+460 A	
	8 4	51-02-0155 51-02-0155 51-02-0155		5 V; 0-060 A 5 V; 0-060 A	
	8 5			5 V; 0-060 A	
	C2	59+06+0683 59+26+2100	+068 u 10 u	10%, 63V , PETP 20%, LOV , Sal.	
	01	50 × 04 × 01 25 50 × 04 × 01 25	1 N 9448 1 N 4448 1 N 4448	75 V; G=L A S1 75 V: G=L A S1	
	D 3	50 = 04 = 01.25	1 N 4448	75 V; 0+L A SE	
	D 5	50-04-0125 50-04-0125	1 N 4448	75 V: 0+1 A SI 75 V: 0+1 A SI	
	D++++6	50.04.0125	1 N 9448	75 V; G-1 A SI	
	D 7 D B	50 - 04 - 01 25 50 - 04 - 01 25	1 N 6468	75 V: 0+1 A SI 75 V: 0+1 A SI	
	D 9	50.04.01.25 50.04.01.25	1 N 5468	75 V: 0+1 A SI	
	D 1D D 11	50 - 04 - 01 25 50 - 04 - 01 25	1 N 5448	75 V: 0+1 A SI 75 V: 0+1 A SI	
	DL 2	50+04+2129 50+04+2129	RED DIFF.	CQV 11-7 CQV 11-7	Sie.
		1.010.019.54	2 = 24 PIN	L = 20 HH	51e+
	G1	50-03-0352	ZTX 751 S	60 V: 2 A PNP ST	Fe-
	02	50-03-0352	ZTX 751 S ZTX 751 S	12 PNP SI (0) V; Z A PNP SI (0)	Fe <sub>4</sub>
	9	50 - 03 - 0352	2TX 751 S		Fe.
	Q5 Qb	50.03.0152 50.03.0152	ZTX 751 S ZTX 751 S	60 V; 2 A PNP SI 60 V; 2 A PNP SI	Fe-
	Q7	50.03.0352	ZTX 751 S	60 V; 2 A PNP SI	Fe. Fe.
	R 2 R 2 R 3	57+11+4221 57+11-4221 57+11+4103	220 220 10 k	2%, 0207 • MF 2%, 0207 • MF 2%, 0207 • MF	
i tu c		0) 86/02/11 (4			FAGE I
	POS-NO.	PART NO.			
END.	POS.NO.			SPECIFICATIONS / EQUIVALENT	MANUE.
	R + R 5	57 • 11 • 4102 57 • 11 • 4102	1.0 k 10 k 10 k 1.0 k 10 k	2%, 0207 , MF 2%, 0207 , MF	
	Reseast	57 • 11 • 4103 57 • 11 • 4102	10 k	2%, 0207 * MF	
	R 7 R 8	57-11-4102 57-11-9103	1.0 k	2%, 0207 . MF 2%, 0207 . MF	
	R9 R10	57-11-4101	100	2%, 0207 • MF	
	R 10 R 11	57 - 11 - 4102 57 - 11 - 4103	100 1+0 k 10 k	2%, 0207 , MF 2%, 0207 , MF	
	Reseall		100	2% 0207 * MF	
	R 13	57-11-4102 57-11-4103	100 1-0 k 10 k	2%, 0207 , MF 2%, 0207 , MF	
	R 15	57-11-4101	100	2% 0207 • HF	
	R 16 R 17	57-11-4102 57-11-4103	100 1+0 k 10 k	23 . 0207 . MF	
	R 14	57 - 11 - 4101	100	2% 0207 • NE	
	R19 R20	57-11-4102 57-11-4103	100 1.0 k 10 k	2%, 0207 , MF	
	R 21	57-11-4101	100	2%, 0207 , HF 2%, 0207 , HF	
	S1 S2	55.15.0112 55.15.0112 55.15.0112	MC II MC II MC II	MOMENTARY PUSHBUTTON SWITCH MOMENTARY PUSHBUTTON SWITCH	MEK.
	S 3 S +	55.15.0112 55.15.0112	HC II	MOMENTARY PUSHBUTTON SHITCH MOMENTARY PUSHBUTTON SHITCH	MEK.
	S 5	55.15.0231	M. L.	MOMENTARY PUSHBUTTON SHITCH	EAD
	S T	55 - 15 - 0 2 3 1 55 - 15 - 0 2 3 1		MOMENTARY PUSHBUTTON SWITCH MOMENTARY PUSHBUTTON SWITCH	EAD
	3	55 - 15 - 0231		MOMENTARY PUSHBUTTON SHITCH	EAG
	S9 S10	55 - 15 - 0231 55 - 15 - 0231		MOMENTARY PUSHBUTTON SWITCH	EAO EAO
	Sees 10	55+15+0231		MOMENTARY PUSHBUTTON SWITCH	EAD
STU	E R (D)	O) 86/02/13 CM	PUSHBUTTO	N 80ARD 1 • 328 • 256 - 00	PAGE 2
ND.	POS-NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MAYUF.
					navor.
ER:Cer arbona P=Poly	amic. EL= ite. MP(TP propylene	Electrolytic + M -Metallized Pol + PS=Polystyrol	P=Hetallized yester+ PC=Po + SAL=Solid A	Paper, MPC=Metallized Poly- lycarbonate, PETP=Polyester luninium, TA=Tantal	
	TURERS :	ecose ar-netal s			
AMUFAL	OAERS T	EAD = Elektro / Fe = ferranti	Apparaten Dit	en	
		MEK = Nekanisk Sie = Siemens	Elektrisk Co	mpagni af 1975	

0810 86/02/13

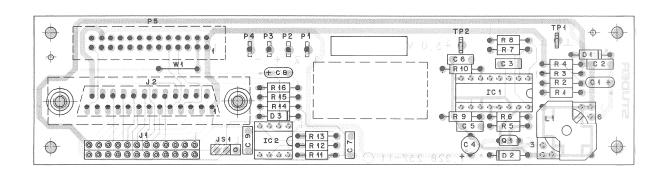
S T U D E R (00) 86/02/13 CM PUSHBUTTON GOARD

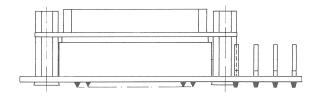
1+328+256-00 PAGE 3

TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00



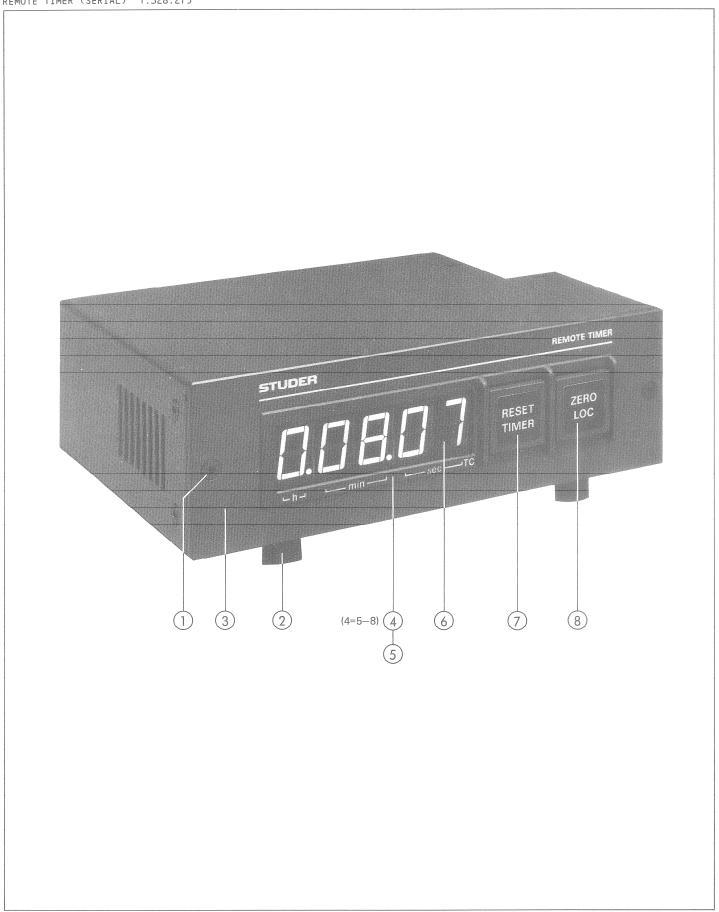
TAPE DECK REMOTE CONTROL MODULE (PARALLEL) 1.328.255.00 - CONNECTOR PCB 1.328.257.00





IND .	P0S+N0+	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.	IND. POS.NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIV	ALENT MANUF.	
	C 1	59.26.0680	68 u	20%, 6.3V . SAL		R *****6	57.11.4102	1.0 k	2%, 0207 , MF		
	C * * * * 2	59.06.0683	.068 u	10%, 63V , PETP		R * * * * * 7	57.11.4472	4.7 k	2%, 0207 , MF		
	C 3	59.06.0104	.1 u	10% 63V PETP		R * * * * * 8	57-11-4472	4.7 k	2%, 0207 , MF		
	C 4	59.22.6220	22 u	-20%, 35V , EL		R *****9	57.11.4392	3.9 k	2%, 0207 , MF		
	C 5	59.06.0223	.02Z u	10%, 63V , PETP		R10	57.11.4222	2 • 2 k	2%, 0207 , MF		
	C * * * * * 6	59.06.0472	4700 p	10%, 63V , PETP		R11	57-11-4105	1 M	2%, 0207 , MF		
	C 7	59.06.0102	1000 p	10% 63V • PETP		R12	57.11.4222	2 * 2 k	2% 0207 • MF		
	C * * * * * B	59.26.2100	10 u	20%, 16V , SAL		R13	57.11.4223	22 k	2%, 0207 , MF		
	C * * * * * 9	59.06.0683	.068 u	10%, 63V , PETP		R14	57-11-4103	10 k	2%, 0207 , MF		
						R 15	57.11.4473	47 k	2% 0207 • MF		
	01	50.04.1118	BZX 6V2	5%, 6.2 V, 0.40 N, Z,		R16	57.11.4122	1 • 2 k	2% 0207 # MF		
	0 2	50.04.0512	1 N 5818	SCHOTTKY	Mot.						
	D 3	50-04-0125	1 N 4448	75 V; 100 mA; SI		TP1	54.02.0320	2.8 0.8	SOLDERING PIN		
						TP2	54.02.0320	2.8 = 0.8	SOLDERING PIN		
	IC * * * * 1	50.05.0279	IP 3524 B	REGULATING PULSE WIDTH MODULATOR	IPS.						
	I C Z	50+05+0283	LM 393 N	DUAL LOW POWER COMPARATOR	TI.						
	J1	53.03.0212	2 = 12 PIN								
	J 2	54.13.0023		D-TYPE, 25 PIN PRINT FEMALE CONNECTO	R						
	JS1	54.01.0021	2 = 0.63	JUMPER							
	L1	1.022.197.00	1,5 mH	CHOKE	St.						
	P 1	54.02.0320	2.8 ≎ 0.8	SOLDERING PIN					l Paper, MPC=Metallized P		
	P * * * * 2	54.02.0320	2.8 = 0.8	SOLDERING PIN					olycarbonate, PETP=Polye	ster	
	P 3	54.02.0320	2.8 0.8	SOLDERING PIN					Aluminium. TA=Tantal		
	P 4	54.02.0320	2.8 0.8	SOLDERING PIN		Cermet=Ceramic M	fetal, MF≃Metal	Film.			
	P * * * * 5	54 • 14 • 2003		26 PIN PRINT MALE CONNECTOR							
						MANUFACTURERS :					
	Q 1	50.03.0352	ZTX 751 S	60 V+ 2 A+ PNP SI	Fe.		Fe = Ferrant				
									niconductors Limited		
	R 1	57-11-4222	2 • 2 k	2%; 0207 ; MF			Mot - Motorol	,			
	R * * * * * 2	57.11.4101	100	2%, 0207 , MF			St = Studer				
	R • • • • 3	57.11.4101	100	2%, 0207 , MF			TI = Texas In	istruments			
	R 4	57.11.4399	3 • 9	2%+ 0207 + MF							
	R 5	57-11-4101	100	2%, 0207 , MF		ORIG 86/02/14					
STU	DER (O	0) 86/02/14 C!	M CONNECTO	RS BOARD 1.328.257-00	PAGE 1	STUDER (O	00) 86/02/14 C	4 CONNECTO	DRS BUARD	1 • 328 • 257-00 PAGE 2	-

REMOTE TIMER (SERIAL) 1.328.275



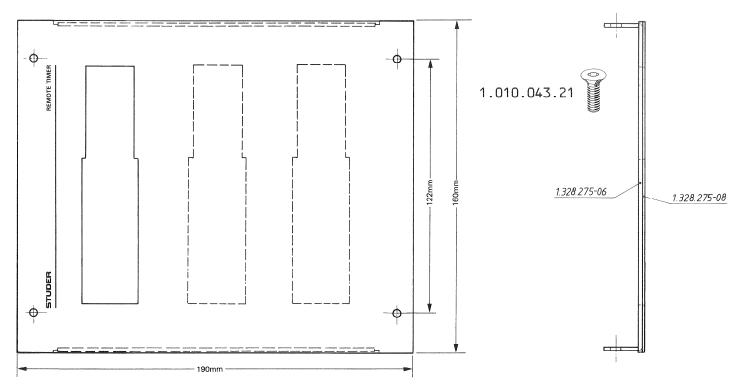
### REMOTE TIMER (SERIAL) 1.328.275

	BESTELLNR.	BEZEICHNUNG	SPEZIFIKATION
1	1.010.045.21 21.51.2354	Schraube schwarz Schraube Ni	МЗх6 МЗх6
2	31.02.0211	Fuss schwarz	D16x6,5
3	1.328.275.01	Frontplatte	
4	1.810.253.00	Display-Gehäuse kompl	ett
5	1.810.303.01	Display-Gehäuse	
6	1.810.303.02	Filterglas	
7	1.011.210.14 1.011.210.01	Schild RESET TIMER Taste	
8	1.011.210.15 1.011.210.01	Schild ZERO LOC Taste	

	ORDER NUMBER	PART NAME	SPECIFICATION
1	1.010.045.21 21.51.2354	Screw black Screw Ni	M3x6 M3x5
2	31.02.0211	Foot black	D16x6,5
3	1.328.275.01	Front cover	
4	1.810.253.00	Display cover compl.	
5	1.810.303.01	Display cover	
5	1.810.303.02	Display window	
7	1.011.210.14 1.011.210.01	Label ZERO TIMER Push button	
8	1.011.210.15 1.011.210.01	Label ZERO LOC Push button	

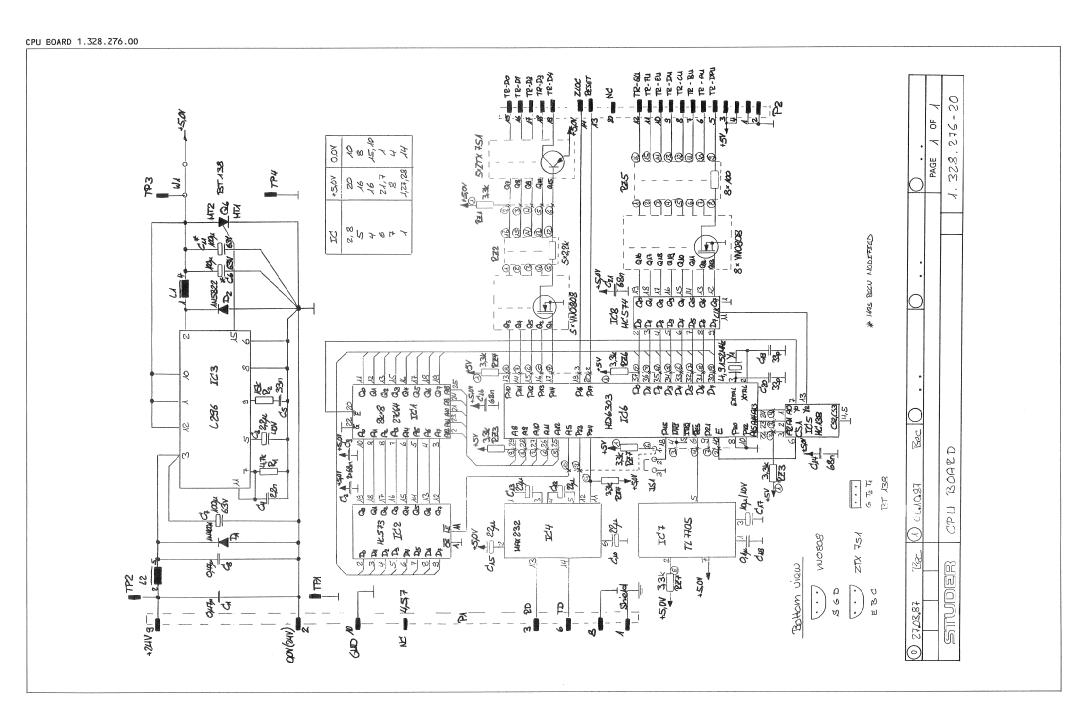
## ZUBEHÖR

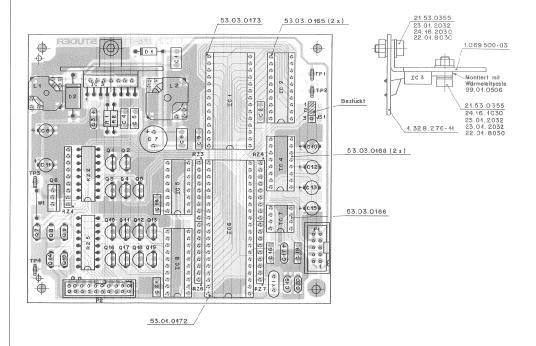
## ACCESSORIES



	BESTELLNR.	BEZEICHNUNG
9	1.328.275.31	Befestigungsblende für 1 Zähler
10	1.328.275.32	Befestigungsblende für 2 Zähler
11	1.328.275.33	Befestigungsblende für 3 Zähler

		ORDER NUMBER	PART NAME SPECIFICATION
	9	1.328.275.31	Mounting frame for 1 counter
Ī	10	1.328.275.32	Mounting frame for 2 counter
	11	1.328.275.33	Mounting frame for 3 counter

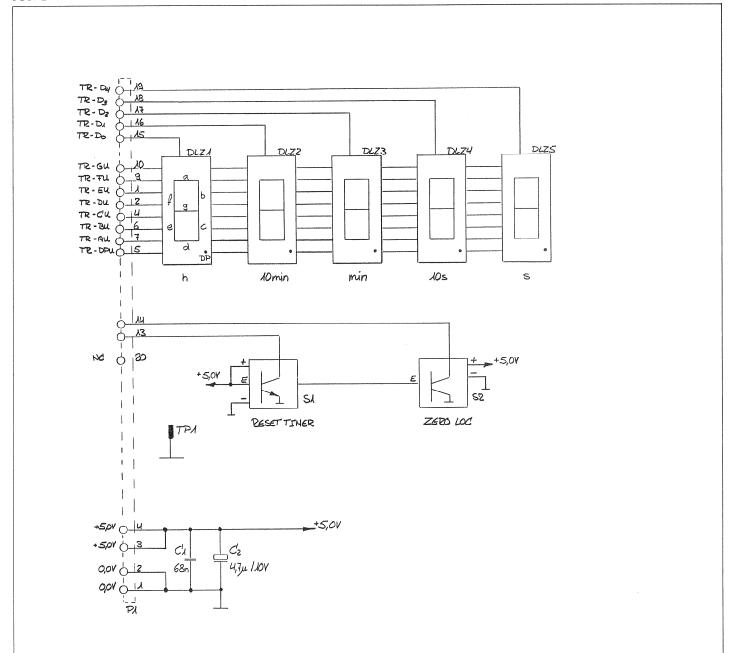




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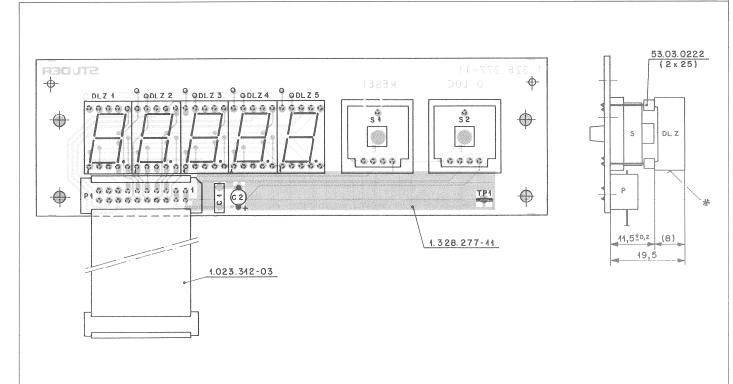
(D .	PDS-80-	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	C1 C2 C3 C4 C5 C6 C7 C9 C10 C11 C12 C15 C14 C15 C16 C17 C16 C17 C17 C19 C19 C19 C21	59,06,00474 59,06,00474 59,26,5229 59,06,0222 59,06,0323 59,22,3101 59,22,4810 59,02,0047 59,04,0047 59,04,04,04 59,04,04 59,04 5	.47 u .068 u 2.20 p .033 u 100 u .010 u .47 u .068 u 22 u .02 u .02 u .03 u .03 u .03 u .04 u .05 u .0	10t. 637 - Petp	
		59.06.0222	2200 p	101. 637 . PETP	
1)	C	59.22.3101	100 u	-20% 10V + EL	
	E8	59.22.8101 59.05.0474	100 u	-20%, 63V , EL 10%, 63V , PETP	
	E10	59.06.0683 59.22.6220	-068 u 22 u	10%, 63% , PETP -20%, 40% , EL	
)	C12	59.22.3101 59.22.6220	100 u 22 u	-20%, 10%, EL -20%, 40%, EL	
	C++++13	59.22.6220	22 U	-2C%, 40V , EL 1C%, 63V , PETP	
	C15	59.22.6223	22 u	-2GX, 4GV , EL	
	617	59.26.2100	10 u	SCT. LOT - SAL	
	C19	59-34-2337	33 p	5% N150 • CER	
	C21	59.36.0683	-068 U	5%, N150 , CER 10%, 63Y , PETP	
	0 · · · · · · 1 D · · · · · · 2	50+04+0122 50+04+0519	15 4001 18 5822	50 V+ 1 A+ Si 40 V+ 3 A+ Schotcky	
	D2	50-04-0519	1N 5822	40 V+ 3 A+ Schottky	
	IC2 IC3 IC4 IC6 IC6 IC6 IC7	1.324.982.27 50.17.1573 50.10.0113 50.15.0123 50.17.1133 50.16.0117 50.11.0122 50.17.1574	74 HC 573	SW 50/87 BEMOTE TIMER 3-state Octal D-Type Letch Switching Voltage Regulator RS 232 Transmitter/Receiver Lori-8 Decoder/Demultiplewer Hicrocomputer Unit (HOS, 8 Bit, 2 Reset Cenerator) 3-state Non Inverting Octal D-Ty;	s e
	103	50-10-0113	L 296	Switching Voltage Regulator	S6 S
	105	50-17-1139	74 HC 138	1-of-8 Decoder/Demultiplexer	
	107	50-11-0122	74 HC 573 L 296 HAX 23ZCP6 74 HC 138 HD 63803RP TL 7705ACP 74 HC 574	Reset Generator	M-2 H1
	11	50-17-1574	74 HC 574	3-state Non Inverting Octal D-Typ	e Flip-Flop
	JS1	54-01-0021	2 = 0+63	Jumper (bridging 2 of 3 pins 54.0	
	L *** ** 1			Inductor	se
UD	E ? (	01) 87/10/05 C	M CPU BDAR	PL 1.328.276-	20 PAGE 1
	POS - NO -	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT	RANUF.
		1+322+252+00	0 - 32 uH	Filter Coil, 0-4 A	St
			2 * 5 Pin 2 * 10 Pin	Straight Print Male Connector	
	P 2	54+14+2001 54+14+2008		Straight Print Male Connector Straight Print Male Connector	
	20	50.03.1505 50.03.1505 50.03.1505 50.03.1505 50.03.1505 50.03.1505 50.03.4552 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352 50.03.40352	VN 0808 H VN 0808 H VN 0808 H VN 0808 H VN 0808 H	80 Y, G.35 A, FET N-Channel	Six
	33	50-03-1505	VN 0808 H	30 Y. 0.35 A. FET N-Channe)	Six Six Six Six Six Phe Fee Fee Fee Fee Fee Fee Six Six Six
	35	50.03.1505 50.03.1505	VN 0808 H	80 % 0.35 A, FET N-Channel	Six
	37	50.99.0106 >0.03.0352	BT 138 ZTX 751 S	500 V+ 8 A+ T+1AC 50 V+ 2 A+ PNP Si	Ph Fe
	8	50.03.0352 50.03.0352	ZTX 751 S ZTX 751 S	50 Y+ 2 A+ PNP Si 50 Y+ 2 A+ PNP Si	Fe Fe
	2 10	50 - 03 - 1505 50 - 03 - 1505	AN 0908 H	30 Y. O.35 A. FET N-Channel	Fe
	12	30-03-1505	BT 136 ZTK 751 S ZTK 751 S ZTK 751 S ZTK 751 S VN 0808 H VN 0808 H VN 0808 H ZTK 751 S ZTK	30 Y. 0.35 A. FET N-Channe	Fe
- 1	J14	50.03.0352	ZTx 751 S	50 V, 2 A, PNP Si	Fe Fe
	16	50.03.0352 50.03.1505	VN 0808 H	50 V+ 2 A+ PMP Si 30 V+ 0+35 A+ FET N-Channel	Fe Six
	d17 d10	50.03.1505 >0.03.1505	VN 0808 M	30 V: 0-35 A: FET N-Channel 30 V: 0-35 A: FET N-Channel	Six
				Straight Print Male Connector  30 * G.35 A SET M*Channel  400 * V. 3 A SET M*Channel  400 * V. 3 A SET M*Channel  30 * V. 3 A SET M*Channel	Six
	l 1 l 2	57-11-4472 57-11-4153	4.7 k	2%, 0207 + %F 2%, 0207 + %F	
	272 (72 (73 (74 (75	57-88-4332 57-88-1222 57-88-4332 57-88-332 57-88-3101 57-88-4332 57-88-4332	8 ° 3-2 k 8 ° 2-2 k 8 ° 3-2 k 8 ° 3-2 k 8 ° 3-2 k 8 ° 100 9 ° 3-2 k 3 ° 3-3 k	21, SIP 9 22, OIL 16 21, SIP 9 21, SIP 9 22, OIL 16 21, SIP 9 21, SIP 9	
	22	57-88-3222	8 = 2+2 k	25, DIL 16	
- 1	2	57-88-4332	8 = 3+2 k	21, SIP 9	
-	Z D	57.88.9332	8 ° 3-3 k	21, SIP 9	
	(Z/	54.02.0320	8 = 3.3 K	21, 31P 9	
			2.8 ± C.8	Straight Soldering Pin	
0 0	ER (0	01) 87/10/06 CM	CPU BCARD	PL 1+328+276-	O PAGE 2
	ans wa	ALAT NO	VALUE	PROGRESS TROOP	
		PART NO.		SPECIFICATIONS / EQUIVALENT	MANUF.
	TP2	54-02-0320	2 . 8 = 0 . 8	Straight Soldering Pin	
	TP2 TP3 TP4	54.02.0320 54.02.0320 54.02.0320	2.8 = 0.8 2.8 = 0.8 2.8 = 0.8	Straight Soldering Pin Straight Soldering Pin Straight Soldering Pin	
	Y1	89-01-056C		*	
	H1	1.010.324.64	4.3 = 10.2	3r i due	St
					36
× 0	1:66	C II tamacitor	5 100 HE/63 5	/ are replaced with 100 uF/10 V.	
Car.	mic. Et a	Flactcalutic. M	R-Matalliand	River MOCHANILIAN DAIL	
onai	O MPETP	-Metallized Pol	yester, PC=Pc	Paper, MPG=Metallized Poly- lycarbonate, PETP=Polyester luminium, Tk=Tantal	
et=(	eramic H	etal. 1F=Metal	, sal=Solid a Film.	rumirium. Tk=Tantal	
	URERS :				
		He = Ferranti Hi = Hitachi			
		Ph = Philips	( incl. Valeo	. 1	
		SGS = SGS Mic	roelettronica	Šp A	
		Fe = Ferranti Hi = Hitachi HAK = HAXIM Ph = Philips SGI = SGS Mic Six = Siliconi St = Studer II = Texas In			
		· · · · rexas in	( incl. Valvo roelettronica x struments		
	14/06				
, ,	ER (0	1) 87/10/05 ;M	CPU BOARD	PL 1-328-276-3	D PAGE 3

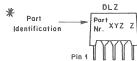
### DISPLAY BOARD 1.328.277.00



0) 10.04.87 Bec	0		0	O
				PAGE A OF A
STUDER	DISPLAY	BOARD		1.328.277-00

### DISPLAY BOARD 1.328.277.00





POS. NO.	PART NO.	VALUE	SPECIFICATIONS / EQUIVALENT MAN	UF.
C1	59-06-0683	.06B u	10%, 63V . PETP	
C * * * * * Z	59 - 26 - 1479	4.7 u	20%, 10V , SAL	
0121	73+01-0124	MAN 6660	7-Segm, orange LED displays common anode	GI
DLZ.e.2	73.01.0124	MAN 6660	7-Segm. orange LED display, common anode	GI
DLZ * * * 3	73.01.0124	MAN 6660	7-Segm. orange LED display: common anode	GI
DL Z 4	73.01.0124	MAN 6660	7-Segma orange LED display, common anode	GI
DL 2 • • • 5	73 - 01 - 0124	MAN 6660	7-Segm. orange LED display. common anode	GI
P 1			see Note 2	
S 1	55.03.0261	RS 76 E	Momentary Key Switch 1 = OC	Rf
5 2	55.03.0261	RS 76 C	Momentary Key Switch 1 ≠ DC	RF
IPl	54.02.0320	2.8 ÷ 0.8	Straight soldering pin	
	C1 C2 Dt21 Dt23 Dt24 Ot25 P1 S1	C1 59-06-06H3 C2 59-26-1879 ULC1 73-01-0124 ULC2 73-01-0124 ULC3 73-01-0124 ULC5 73-01-0124 ULC5 73-01-0124 P1 55-03-0261 S2 55-03-0261	C1 59-06-0683 -068 u C2 59-26-1179 4-7 u ULC1 73-01-0124 MAN 6660 ULC2 73-91-0124 MAN 6660 ULC3 73-01-0124 MAN 6660 ULC4 73-01-0124 MAN 6660 ULC5 73-01-0124 MAN 6660 P1 55-03-0261 R5 76 C	C

Index 01 : Part #53.03.0228 replaces part #53.03.0222 (10.11.88)

(01) Note 1 : All DLZ devices are plugged into socket terminal strips 53.03.0228 (2 ° 5 sockets for each device).

Note 2 : Print connector 54.14.5034 of the 20-connductors ribbon cable 61.023.312.03 is soldered on print.

PETP=Polyester, SAL=Solid Aluminium

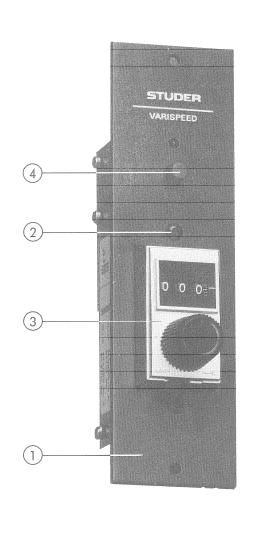
ORIG 88/11/10

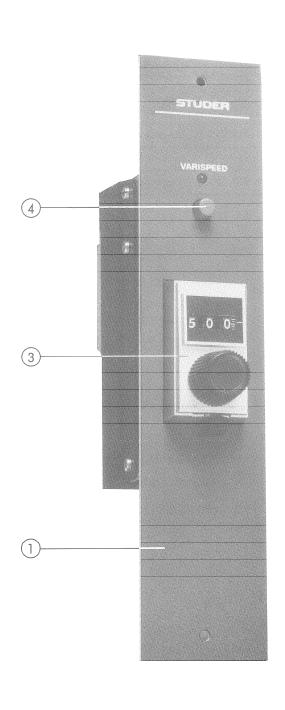
S T U D E R (01) 88/11/10 CM DISPLAY BOARD

PL 1.328.277-00 PAGE 1

VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00 VARISPEED CONTROL MODULE 1.328.290.00 - VARISPEED CONTROL PCB 1.810.762.82





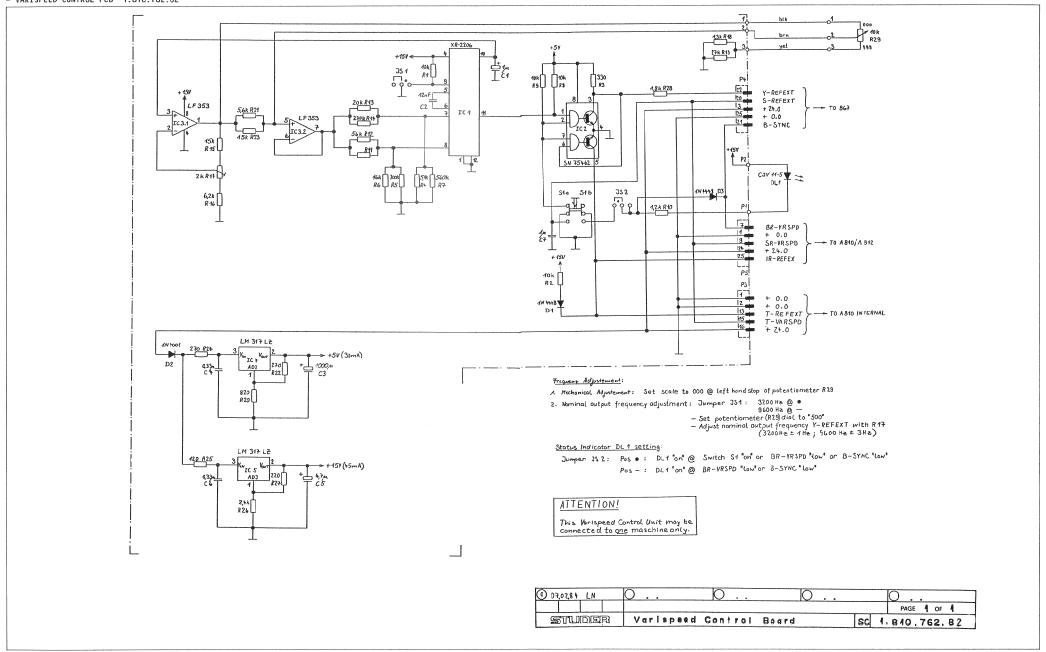


VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00 VARISPEED CONTROL MODULE 1.328.290.00 - VARISPEED CONTROL PCB 1.810.762.82

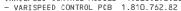
-						
	A	ΝZ	BESTELLNR.	BEZEICHNUNG SPEZIF	IKATION	
	1	1 1.328.253.00		Nachrüstsatz Varispeed (nur für parallele Fernsteuerung)		
		1	1.328.290.00	Varispeed Einheit		
	1 3 3	1 3 3 1	21.01.0279	Varispeed control Print Z-Schraube Sicherungsscheibe Isolation	M2,5x6	
01	1	1	1.328.250.10 1.810.330.02 1.328.290.01 1.328.290.02	Unterlage Träger	PPP FOR A STATE OF THE AREA OF	
01	2		1.010.025.21	Linsenkopfschraube	мЗхб	
03	1	1	58.99.0116	Feinantrieb mit Ableseskala		
04	1	1	1.810.320.07	Druckknopf, lang	rot	

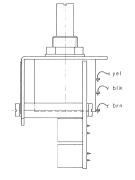
	Ø.	ΓΥ	ORDER NUMBER	PART NAME SPECIF	ICATION
	1		1.328.253.00	Varispeed conversion kit (for parallel remote control	only)
		1	1.328.290.00	Varispeed control module	
	1 3 3	1 3 3	21.01.0279		M2.5x6
01	1	1	1.328.250.10 1.810.330.02 1.328.290.01 1.328.290.02	Spacer Support	
02	2		1.010.025.21	Round head allen screw	МЗхо́
03	1	1	58.99.0116	Fine drive with reading scale	
04	1	1	1.810.320.07	Push button, long	red

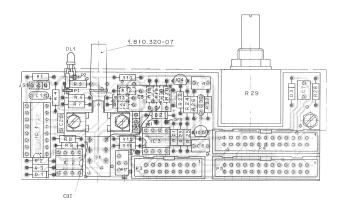
VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00
VARISPEED CONTROL MODULE 1.328.290.00
- VARISPEED CONTROL PCB 1.810.762.82



VARISPEED CONVERSION KIT (FOR PAR. REMOTE CONTROL ONLY) 1.328.253.00 VARISPEED CONTROL MODULE 1.328.290.00







MANUF	QUI VAL ENT	TONS / €	IC AT	20EC1F	VALUS	٠	NO.	PAR	0.	POS-NI	. CM
Ph		• Sal	4 OV	202.	1 uF			59.26		C 001	
		• Cer				1.2		59.99		C++001	
	0 < 10mm	21 nm 0				1000		59.99		C++001	
		, Petp				0 - 3		59.06		C++001	
Ph		<ul> <li>Sal</li> </ul>				4.7		59.26		C 001	
		+ Petp				0.3		59.00		C++000	
		• Petp	50V	10%,	LuF		5105	59.06	07	C 000	
ITT+FC+TF	Ph-Ses.					14 4		50.04		8 000	
ot +5 I+Sol	9					14 4		50.04		0000	
ITT+Fc+Tf	Ph.Ses.				1448	14 4	0125	50.04	0.3	0000	
Sie					11-7	CQVI	2129	50.04	01	DF + 00 0	
Fe			16	SG 220	O6CP	X8220	0108	50.11	01	IC = 000	
TI					162P	SN754	7350	50+05	0.2	IC = 000	
T1+NS+Mot			CP	TL 072	353N	Lº 3	0101	50.09	0.3	10.4000	
Nat. Hot						L431		50.10	04	IC + 000	
Nat+Mot					7LZ	L431	0108	50.10	05	10.000	
	(10) sec note ?	Bri dae	1500	54.01.	(3°)	Pin		54.01	01	JS = 000	
	(10) see note 2	Bridge	1500	54.01.0	(30)	Pin	0020	54-01	0.2	JS + 000	
			В	2 + 8 0 0 + 1				54-02		P 000	
			8	2 . 6 = 0 . 4				54.02		P ODC	
	see note 3	s	tact:	16-cont				54-14		P++000	
	see note 4			26-cont				54.14		P++000	
	see note 4	s	tact	26-cont			2003	54.14	05	P 000	
				5%	kühn			57.11		R++000	
				5%	kühn			57.11		R ODC	
				5%	Ohn C			57.11		R 000	
				1%	kühn			57.11		R ODC	
				5%	k Ohn			57.11		R. + 000	
				12	kOhn			57.11		R000	
				5%	kOhn kOhn			57.11		R-+000	
PAGE	1-810-752-82	ARO	L 80	CONTROL	RISPEED	. VA	39 LN	85/07	(00)	DER	TU

MANUF.	/ EQUIVALENT			PART NG.	<ul> <li>PDS+NO+</li> </ul>
		5%	10 kOhn	57.11.4103	R==0009
		5%	L-2 kOhs	57.11.4122	Re+0010
			not used		R0011
		12	56 k@hn	57.11.3563	
		1%	20 kühn	57.11.3203	R0013
		5%	270 k0he	57.11.4274	Re=0014
		5%	15 kOhn	57-11-3153	Re-0015
		97	6.2 kOhn	57.11.3622	R++0016
		25 turns	2 kDhn	58.05.0202	R0417
		12	1.3 kOhn	57,11,3132	R++0018
		53	27 kOhn	57+11+4273	R 0019
		17		57.11.3821	Re+0020
		12	5-6 k Ohn	57+11+3562	Res 0021
		12	270 Ohn	57.11.3271	
		13	15 kObe	57,11,3153	Res 0023
		5%	270 Ohn	57.11.3271	R==0024
		53	120 Ohn	57.11.4121	R++0425
		12		57,11,3242	
		13	220 Ohn	57-11-3221	Re=0027
		5%	Le 8 k Ohn	57,11,4182	
		10 turns		58+99+0123	Re=0029
St		Switch		1-171-190-07	See 0401

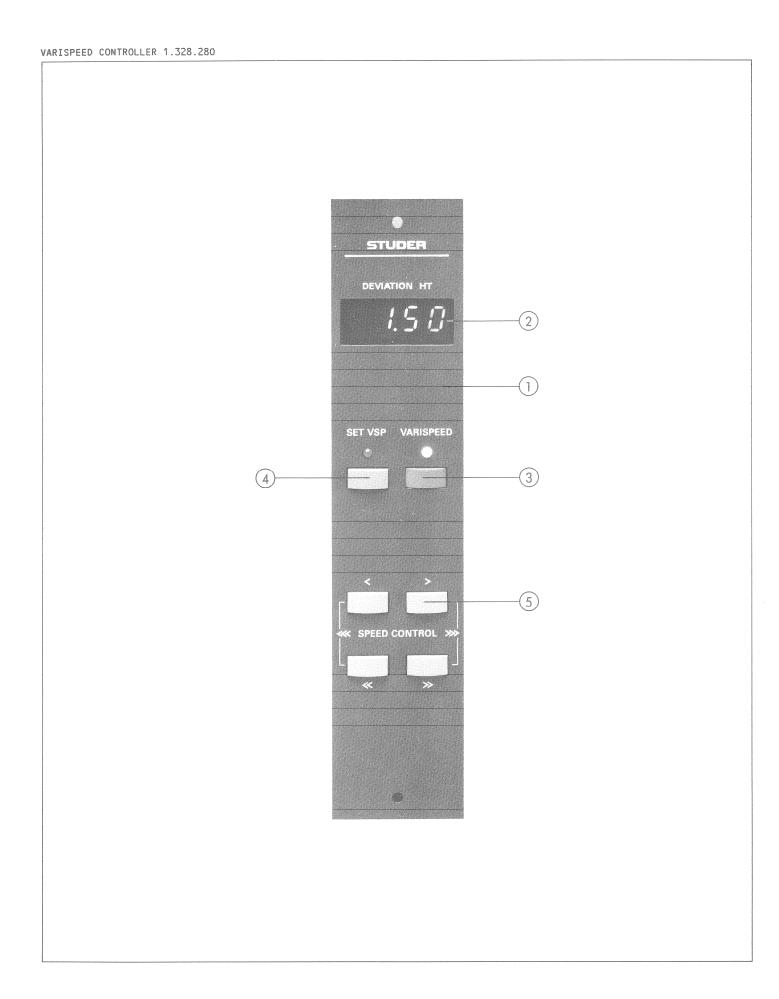
S T U D E R (00) 85/07/09 LN VARISPEED CONTROL BOARD 1.810.762.82 PAGE 2

140.	P!	DS = NO =	PART NO.	VALUE	SPECIFICATIONS	/ EQUIVALENT	MANUF.
hote	1:	12nF + 50V:		B 37 983	- J - 5123 - J		
			Kemet Wr.	C 362 S	123 J 5 G 5 CA		
Note	2:	Contact pin:	Berg Nr.				
			Philips Nr.				
		Bridge:	Berg Nr.				
			AMP Nr.				
			Philips Nr.	2422 024	88003		
Note	3:	16-contacts:	Yamaichi Ar.	FAP-16-0	8//4		
			Burndy Nr.	8 PH 9 B	16 800 65		
Note	4:	25-contacts:	Yamaichi Nr.	EAP-26-0	8774		
			Surndy Nr.				

Manufacturer: Exeixar, ForFairchild, EleCeneral Instruments, [TT-Interneta'], MotMotorcila, MacMational[Hatsushita] MotMational Semiconductors, Ph-Philips, Sessescosem, Siessiemens, Solsolitron, Steftuder, Tfalafatuken, II-leks, Instrument

OREG 45/07/09

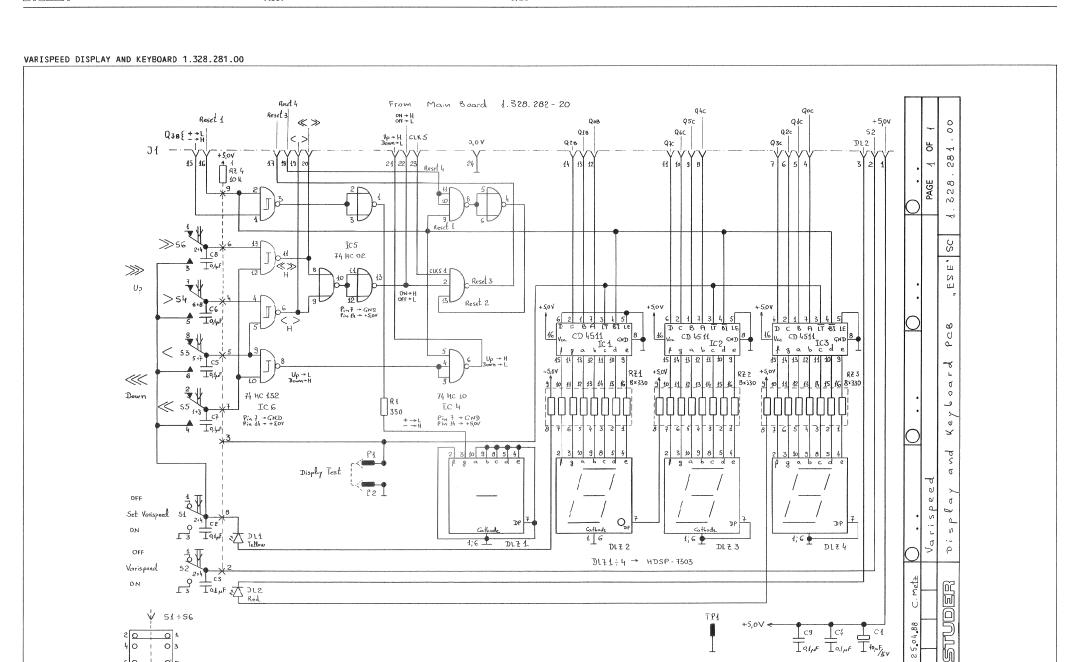
5 T U D E R (00) 85/D7/09 LN /ARISPEED CONTROL BOARD 1.810.762.82 PAGE 3



## VARISPEED CONTROLLER 1.328.280

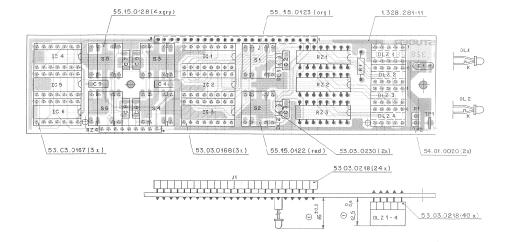
_		
	BESTELLNR.	BEZEICHNUNG
1	1.328.280.01	Frontblende
2	1.328.280.03	Blende
3	55.15.0122	Tastenknopf rot
4	55.15.0123	Tastenknopf orange
5	55.15.0128	Tastenknopf grau

	ORDER NUMBER	PART NAME SPECIFICATION
1	1.328.280.01	Front cover
2	1.328.280.03	Display cover
3	55.15.0122	Push button red
4	55.15.0123	Push button orange
5	55.15.0128	push button grey



0 3

## VARISPEED DISPLAY AND KEYBOARD 1.328.281.00



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I ND+	P05 + N0 +	PART VO.	VALUE	SPECIFICATIONS / EQUIVALENT	HANUF
	C 1	59=26=2100	10 u	201+ 16V + 1AL	
	C *** * * * Z	59+26+0104	41.0	10% 63V + PETP	
	6	59-06-0104	41.0	102 - 63V - PETP	
	C	59-06-0104	.1 u	10% 63V * PETP	
	C *** * * * 5	59-06-0104	+1 U	10% 63V + PETP	
	(	59-36-0104	-1 u	103, 63V , PETP	
	C *** * * 7	>9-06-0104	.1 u	10% 63V + PETP	
	C8	59-06-0104	+1 U	10% 63V * PETP	
	C9	59-96-0104	-1 v	101, 63V , PETP	
	DL 1	50-04-2130	LY 3160	Diffused yellows	Sie.
	0L+++2	50-04-2129	LS 3160	Diffused red.	Sie.
	ULZ 1	73.31.0128	HDSP-7303	Red Micro-Bright 7 Seq. Displays 7.6 m	n. 14P.
	012 * * * 2	73.01.0128	HDSP-7303	Red Micro-Bright 7 Seg. Display: 7.6 mg	. HP.
	OL( * * + 3	73.01.0128		Red Micro-Bright 7 Seg. Displays 7.6 m	
	DLZ 4	73-01-0128	HDSP-7303	Red Micro-Bright 7 Seg. Display: 7.6 m	. HP.
	161	50+07+0511	DD +511	SCD-to-7 Seq. Latch/Decoder/Driver.	
	102	50-07-0511	CD +511	3CD-to-7 Seg. Latch/Decoder/Driver.	
	103	50.07.0511	CD +511	BCD-to-7 Seg. Latch/Decoder/Driver.	
	10		74 HC 10	Triple 3-Input NAND Gate.	
	105		74 HC C2	Quad Z-Input NOR Gate.	
	106	50+17+1132	74 HC 132	Juan 2-Input Schmitt Trigger NAND Gate	
	J *** * 1	53.03.0218	24 * 1 pin	itraight socket strip ( 24 pcs.)	
	P * * * * 1	54+01+0020	0.6390.63	Straight soldering male pin.	
	P *** * 2	54.01.0020	3.63=0.63	Straight soldering male pin-	
	R *** * 1	57+11+3331	330	lt+ 0207 + MF	
	221	57-88-3331	9 = 330	2%, DIL16	
	822	57.88.3331	8 * 330	2%, DTL16	
	823	57.88.3331	9 ≈ 330	2%, DIL16	
	RZ 4	57.88.4103	8 º 10 k	2%, SIP 9	

S T U D E R (OO) 88/02/11 CM DISPLAY & KEYBOARD PCB PL 1-328-281-00 PAGE 1

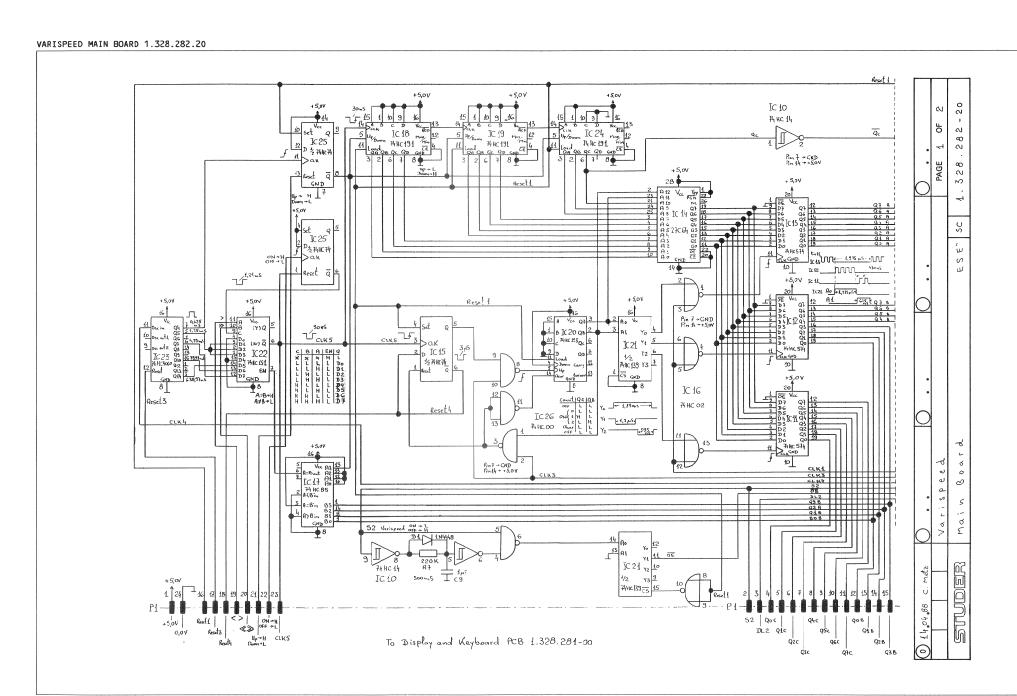
I NO .	PO5 = NO =	PART NO.		VALUE	SPECIFICATIONS / EQUIVALENT	MANUF.
	S 1	55 - 15 - 0113	2 0	U	Push-Push Button Schwitche	HEC.
	S 2	55.15.0113	5 =	U	Push-Push Button Schwitch.	MEC.
	S *** * * 3	55.15.0112	2 2	U	Homentary Fush Button Switch.	MEC.
	S 4	55-15-0112	5 0	U	Homentary Push Button Switch.	MEC.
	S 5	55-15-0112	5 \$	U	Momentary Push Button Switch.	MEC.
	S *** * * * b	55+15+0112	5 0	U	Momentary Fush Button Switch.	MEC-
	TP1	54+02+0320	2.8	e C.8	Straight soldering strip.	

Note: OL 1 and DL 2 are mounted on LED sockets #53.83.0230 (2 pcs.) Decices OLZ 1-to-4 are mounted on 2 % 5 pcs. #53.03.0218 pins.

SALeSolid Aluminium, PETP=Polyester, MF=Metal Film.

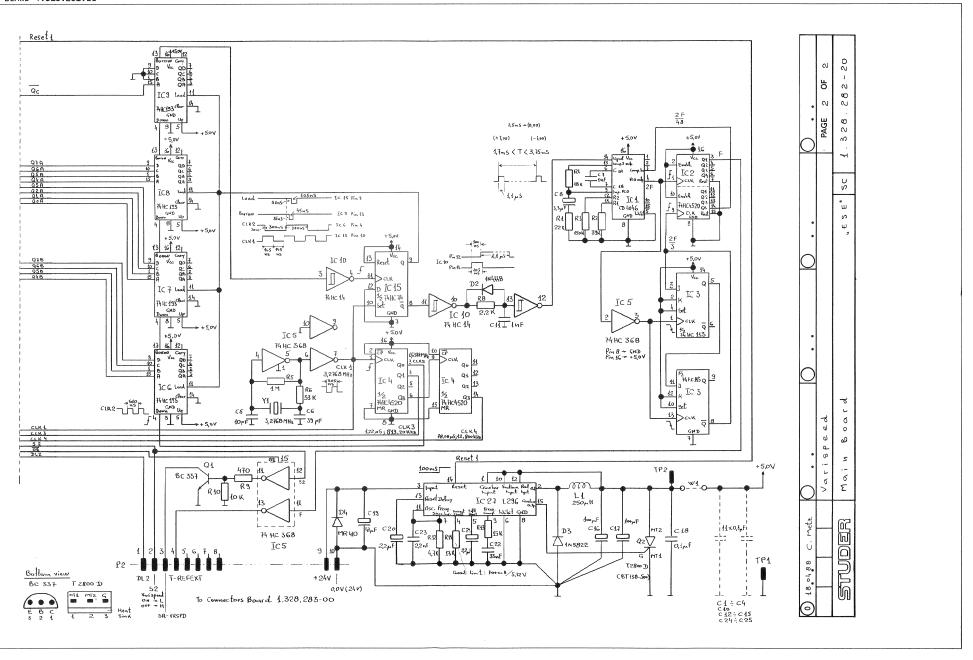
ORIG 88/02/11

S T U D E R (OD) 35/32/11 CM DISPLAY & KEYBOARD PCB PL 1-329-281-00 PAGE 2



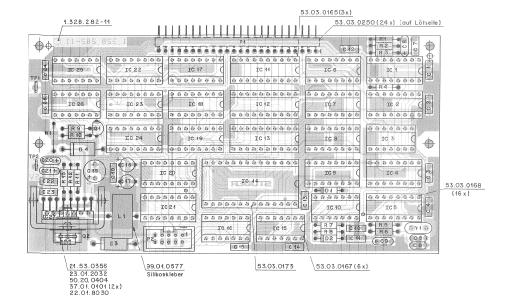
## VARISPEED MAIN BOARD 1.328.282.20

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VARISPEED MAIN BOARD 1.328.282.20



IND.	POS-NO-	PART NO.		SPECIFICATIONS / EJUIVALENT MANUF.	
	C2 C3 C5 C5 C7 C8 C9 C10 C11	5%-06-0104 5%-06-0104 5%-06-0104 5%-06-0105 5%-34-1100 5%-34-2390 5%-06-0102 5%-26-2339 5%-26-2109 5%-06-0104 5%-06-0104	-1 u -1 u -1 u -1 u 10 p 39 p 1000 p 3-3 u -1 u	10%, 61% PRIP 10%, 03% PRIP 10	
	C	\$ 4, 16, 0134 \$ 0.06, 0134 \$ 0.06, 0134 \$ 0.06, 0134 \$ 1, 24, 2370 \$ 0.06, 0134 \$ 1, 2370 \$ 0.06, 0132 \$ 0.06, 0132 \$ 0.06, 0132 \$ 0.06, 0134 \$ 0	-1 u	10%, 63V , PEFP	
	02 03 04	50-04-0125 50-04-0125 50-04-0519 50-04-0521	1N 4448 1N 4448 1 N 5322 MUR 410	75 V, 0-1 A, 4 ns, Si. 75 V, 0-1 A, 4 ns, Si. 40 V, 3 A, Schottky. Hat. 100 V, 5 A, Si. Mat.	
STU	IC 1 IC 2 IC 3 IC 4 IC 5 IC 6	50-07-0046 50-17-4520 50-17-1113 50-17-4520 50-17-1368 50-17-1193	MC 14046 B 74 HC 4520 74 HC 113 74 HC 4520 74 HC 368 74 HC 193	Phase-Lacked Loop.  Dual 1-bit Binary Counter.  Dual 1-bit Binary Counter.  Dual 4-bit Binary Counter.  Her 3-State Inv. 80ff. 2-bit 6-bit Sect.  Preset. 4-bit Bin. Up/100 Count. with Reset  PL 1.328.282-20 PAGE 1	
IND.	PO\$=#0+	PART NO.	V.ALU€	SPECIFICATIONS / EQUIVALENT MANUE.	
	IC 7 IC 8 IC 9 IC 10 IC 11 IC 12 IC 13 IC 14 IC 15 IC 16 IC 17 IC 16 IC 17 IC 18 IC 19 IC 20 IC 21 IC 21 IC 22 IC 22	50.17.1193 50.17.1193 50.17.1193 50.17.1193 50.17.1014 50.17.1574 50.17.1574 50.17.1574 50.17.1574 50.17.1002 50.17.1002 50.17.1002 50.17.1003 50.17.1191 50.17.1191 50.17.1193 50.17.1193 50.17.1193 50.17.1193 50.17.1193 50.17.1193 50.17.1193 50.17.1193	74 HC 193 76 HC 193 76 HC 193 74 HC 193 74 HC 574 74 HC 574 74 HC 574 74 HC 674 74 HC 85 74 HC 191 74 HC 191 74 HC 193 74 HC 191 74 HC 191	PresetsBit Bins Up/Joue Counts with Reset PresetsBit Bins Up/Joue Counts with Reset PresetsBit Bins Up/Joue Counts with Reset Water Bins Up/Joue Counts with Reset Water BinsBit Bins Up/Joue CountsBit Shared Water BinsBit Bins	
	IC 23 IC 24 IL 25 IC 26 IC 27	50.17.4060 50.17.1191 50.17.1074 50.17.1009 50.10.0110	74 HC 191 74 HC 191 74 HC 74 74 HC 00 L 296	a input usta selector/nurtiplexer- 14 Stage Sinary Ripple Counter with Osc- Presettable v-Bit Binary Up/Coun Counter- Dual D-Type Filip-Filop with Set & Reset- Gual 2-Input NAND Gate- High Current Switching Voltage Regulator SGS	
	P1 P2	BE15310007	250 uH 24 ° 1 pin 2 ° 5 pins	1 Av Toroidal Choke» Ste Right Angle Hale Contact Strip- (24 pcs-) Straight Print Mala Coanectors	
	Q2 Q2	54.14.2001 50.03.034) 50.99.0106	2 ° 5 pins 9C 337-25 T 2800 D	Straight Frint Male Connector.  45 V. O.8 A. Si. NPN.  400 V. B A. Triac. RCA.	
	R2 R2 R3 R4 R5 R5	57.11.3223 57.11.3393 57.11.3154 57.11.3155 57.11.3333 57.11.3224	22 k 39 k 150 k 18 k 1 M 33 k 220 k	11. 0201 "	
STUI	) ER (00	) 88/03/08 CM		PL 1.328.282-20 PAGE 2	
IND.		PART NO.		SPECIFICATIONS / EQUIVALENT MANUF.	
	R9 R10 R11 R12 R13	57-11-3222 57-11-3671 57-11-3103 57-11-3133 57-11-3472 57-11-3153	2.2 k 470 10 k 13 k 4.7 k 15 k	1%, 0.207 , wp 1% 0.207 , wp 1%, 0.207 , wp 1%, 0.207 , wp 1%, 0.207 , wp 1%, 0.207 , wp	
	TP 2		2.8 ° 0.8	Straight Soldering Strip. Straight Soldering Strip.	
	Y1	89-01-0376		Bridge. HC 18 U Ceramic Resonator.	
		Electrolytic+ P	ETP:Polyester	r, SAL=Solid Aluminium,	
MANUFA	CTUREAS T	Mot = Metorola RCA = R(A (orp SGS = SGS Mic St = Studer	oration roelettronica	s Sp A	
	8/03/08	D) 88/03/08 [M			
310	U (UI	o, 00/03/05 [M	HAIN BUARD	PL 1=)28=282-20 PAGE 3	

